## ECLIPSE WINDMILL CO. *v.* MAY and others.

(*Circuit Court, N. D. Illinois.* July 10, 1883.)

1. PATENTS FOR INVENTIONS—REISSUED PATENTS NOS. 8,826, 8,443, AND 9,493—INFRINGEMENT.
   Reissued patent No. 8,826, granted to the Eclipse Windmill Company, July 29, 1879, as assignee of original patent, granted to L. H. Wheeler, September 10, 1867, and reissued patent No. 8,443, granted to Palmer C. Perkins, October 8, 1878, the original of which was issued August 18, 1869, *held*, not to be infringed by the "improved May windmill," manufactured by the defendant. *Held, further*, that the "improved May windmill" does infringe the third and fourth claims of reissued patent No. 9,493, issued to the Eclipse Windmill Company, December 7, 1880, as assignee of the original patent, William H. Wheeler, dated October 20, 1874.
2. SAME—REISSUED PATENT NO. 8,443.
   Whether the reissued Perkins patent is valid, *quære*.

In Equity.

*Hill & Dixon*, for complainant.

*G. L. Chapin* and *Coburn & Thacher*, for defendants.

BLODGETT, J. This suit is brought to restrain an alleged ment of the following patents, and for an accounting: (1) Reissued patent No. 8,826, granted to complainant July 29, 1879, as assignee of original patent to L. H. Wheeler, dated September 10, 1867. (2) Reissued patent No. 9,493, issued to complainant, December 7, 1880, as assignee of the original patent to William H. Wheeler, dated October 20, 1874. (3) Reissued patent No. 8,443, to Palmer C. Perkins, dated October 8, 1878, the original of which was issued August 18, 1869. No question is made as to complainant's title.

It appears from the proof that prior to the twenty-third of November, 1880, complainant had brought suit against defendants for infringement of the two first-named patents, reissue No. 8,826, and original patent to W. H. Wheeler of October 20, 1874,—the application for the reissue of the latter being then pending; and on the twenty-third of November, 1880, a written agreement was made between the parties by which defendants admitted the validity of the two Wheeler patents, and agreed that they would not "*contest the validity of said patents or any reissue thereof*," and further agreed that they would "*permanently discontinue and cease the manufacture and sale of windmills constructed with a hinged or pivoted vane, as embodied in said patents, or in any manner infringing upon said patents.*" This agreement takes out of this case all controversy as to the validity of the first two patents set out in complainant's bill, and only leaves open the question whether defendants, by the mill they are now making and selling, infringe these two patents, and the questions of the validity and infringement of the Perkins patent. The object of the L. H. Wheeler patent was to regulate and control the action of wind-wheels for the purpose of rendering their action more uniform and effective than theretofore,

and its distinctive feature is a device whereby the wind-wheel is caused to swing automatically out of the wind, by the direct action of the wind itself, by means of a single pivoted tail-vane, or rudder, standing normally in the line of the wind; the arrangement of the operative parts being such that when the force of the wind reaches or exceeds a certain pressure, the wind-wheel will turn wholly or partly out of the wind, so as to bring the wheel either at an angle to the wind, so that the wind acts with diminished force, or in a line parallel with the tail-vane or rudder, when the wheel will be wholly out of the wind. Through this device it is claimed by complainant the construction of a solid-wheel self-regulating windmill was accomplished. Before the Wheeler invention, as the proof shows, the regulation of wind-wheels in practical use had been obtained by means of adjustable sails or blades, which opened and closed according to the force of the wind. This made necessary a large number of joints and couplings, which were liable to get out of repair, and added much to the complication of the mechanism. There was also the old Dutch form of wheel, in which the sails were unfurled, reefed, and furled by hand. In all the older forms of operative wind-wheels the vane or rudder was a rigid extension of the horizontal axis of the wheel. In the original and reissued L. H. Wheeler patent there was a disclaimer in these words:

"We are further aware that a revolving wheel frame or support has been mounted on a revolving turn-table, which, in turn, is mounted on the top or cap of the tower, so that the turn-table to which the rudder is rigidly fixed rotates on one bearing-joint, and the wheel-support rotates on another formed or placed on the turn-table, both being interposed between the wheel and the tower."

It is conceded that this disclaimer was made by reason of the fact that the records of the patent-office, at the time the application for the L. H. Wheeler patent was filed, showed the issue of a patent on the twenty-sixth of August, 1856, to Chambers and Hargrave for a windmill containing the elements described in this disclaimer; and defendants now insist that they have the right, notwithstanding their admission of the validity of the Wheeler patents, to construct windmills in substantial conformity with the devices shown in the Chambers and Hargrave patent; and the controversy in this case, so far as these two Wheeler patents are involved, is whether the defendants' mill is constructed upon the principle of the Chambers and Hargrave patent, or whether it invades the domain covered by the Wheeler patent; for defendants, by the agreement of November 23, 1880, agree not to contest the validity of the Wheeler patents, thereby conceding the novelty and usefulness of those inventions.

I think it must be admitted that complainant, in the practical adaptation of the Wheeler devices to a working windmill, has made several quite noticeable mechanical changes in the operative parts, although it is of course claimed that these are allowable mechanical changes,

and still preserve the essential principles of the Wheeler inventions; and it is equally obvious, from an inspection of the defendants' mill, that it contains many changes from the form of construction shown in the model and drawings of the Chambers and Hargrave patent, and the important question is whether these are mere allowable mechanical changes, or whether they invade the principle of the Wheeler mill.

The distinction drawn between his device and that of Chambers and Hargrave, by Mr. Wheeler, in the language immediately following the disclaimer quoted, is that the turn-table which carries the wheel in Chambers' and Hargrave's device is mounted on top of the turn-table which carries the vane, so that the weight of the wheel is necessarily carried upon the turn-table of the vane, while in the Wheeler device the vane is "pivoted upon a separate joint, not interposed between the tower and wheel, and therefore not sustaining any part of the weight of the wheel, nor obliged to resist the strain of the working machinery."

In the copy of the Wheeler model, in evidence in this case, the tail-vane is shown pivoted to the turn-table on which the wheel rests, and which carries the weight of the wheel with a drum or pulley and cord and weights so arranged as to hold the vane in line with the axis of the wheel until the force of the wind on the wheel becomes so great as to overcome the power of the weights and allow the wheel to swing out of the wind. In other words, if there was no tail-vane to the Wheeler turn-table to hold the wheel in the wind, it would vibrate in the wind and be liable to swing either way out of the wind; but the vane attached to the turn-table holds the wheel in the wind until the force of the wind becomes sufficient to overcome the resistance of the weight and flex the joint by which the vane is attached to the turn-table.

There can be no doubt, from the drawings and specifications of the Chambers and Hargrave device, that it embodies the idea of a jointed or pivoted vane, whereby it was expected by the inventors that the mill would be self-regulating; that is, that the wheel, when the pressure of the wind became too great, would fold back out of the wind, the vane retaining itself in the line of the wind.

The main differences between the Wheeler and the Chambers and Hargrave devices seem to be: (1) The Chambers and Hargrave mill is so constructed that the weight of the wheel, with its horizontal shaft and driving gear, is carried upon the rudder-head or turn-table which carries the rudder, and the rudder-head also turns upon the cap of the tower, which must cause a large amount of friction—enough, as is claimed by complainant, to make the device wholly useless. (2) The turn-table which carries the rudder, and the turn-table which carries the wind-wheel, revolve upon a common center of motion, which is the center of the plate, *d;* while, in the Wheeler organization, the pivoted joint, by means of which the wheel folds back out of the wind and in a line substantially parallel with

the vane, is outside the center of motion of the turn-table which carries the wheel.

I am not prepared to say that the mere difference in construction between the two devices, which only showed a difference in the amount of friction against the earlier device, would make a difference in principle or a patentable difference, because this excess of friction might be overcome or reduced within practical limits by some mere mechanical appliances, although it may be that the great friction involved in the mechanism shown may have decided the question against the practical usefulness of the Chambers and Hargrave patent, as it is conceded that no machines were made until after the introduction of the Wheeler mills embodying the principles of this patent. But I am of opinion that the change of location in the vibrating joint by Wheeler must be deemed the main element of difference between the two devices; and it must be conceded, from the proof, that the Wheeler device was at once accepted by the public as a practical and useful machine, and has gone largely into use.

The defendants, at the time of the suit mentioned in the agreement between the parties of November 23, 1880, had been engaged in the manufacture of a windmill constructed with a tail-vane pivoted outside the center of motion of the turn-table which carries the wheel; in fact, pivoted to the back side or rear of the mill-head. After the settlement of that suit, defendants commenced the manufacture of what they termed the "improved May windmill," and the question is, does this mill come within the two Wheeler patents? This mill has a pivoted tail-vane, but the turn-table of the wheel is constructed of a hollow column, inside of which the pitman works, and on which is mounted a cap which contains two pillars which carry the axle of the wind-wheel. A thimble or band passes around this hollow column, so arranged that it turns freely about it, and a flange of the column rests upon the top of this thimble, but with friction balls interposed between the top of the thimble and the lower edge of the flange. The column also extends below the thimble, and is stepped upon a plank below the top of the tower. The lower rim or bottom of this thimble or vane-band also rests on the cap of the tower, and is so arranged that it seems to carry some part of the weight of the wheel turn-table or wheel column. Defendants claim that this arrangement is a mere mechanical improvement upon the Chambers and Hargrave machine; that the hollow column surmounted by the two pillars which carry the wind-wheel is but the plate, *f*, of the Chambers and Hargrave device, and the thimble or collar, which carries the tail-vane, is the Chambers and Hargrave plate, *e*; that the plate on the top of the tower on which the bottom of the thimble or collar rests is but the plate, *d*, of the Chambers and Hargrave device; that they have in fact by this construction, by mere well-known mechanical devices and improved construction, reduced the friction which rendered the Chambers and Hargrave device impracticable; but that they have

kept strictly within the distinctive principle of the Chambers and Hargrave mill.

An examination of the model of defendant's mill, as well as the working mill produced in evidence at the hearing, shows that the tail-vane of their mill works around what is the equivalent of the wheel turn-table, instead of being pivoted to the turn-table, as it is in the L. H. Wheeler mill, and as it was in the old defendant's mill upon which the settlement of November, 1880, was made. It seems to me that it must be admitted that in the construction of defendant's mill, the "improved May," "the revolving wheel-frame is mounted on a revolving turn-table, which in turn is mounted on the cap of the tower, so that the turn-table, to which the rudder is rigidly affixed, rotates on one bearing or joint, and the wheel-support rotates on another, formed or placed on the turn-table;" both—that is, both bearings or joints—being interposed between the wheel and the tower. The defendants' arrangement of parts, it seems to me, meets both of these conditions. The rudder turn-table rotates on one bearing, and the wheel-support rotates on the rudder turn-table, and both bearings are between the wheel and top of the tower. It is true, the turn-table column extends down through the rudder-head and below the top of the tower, but this is a necessary mechanical arrangement in order to obtain a safe and steady attachment of the wheel and rudder machinery to the tower, and is no more of a change than what has been done in the practical construction of mills under the Wheeler patent.

I am, therefore, of opinion that defendants do not infringe the L. H. Wheeler patent.

The W. H. Wheeler patent is for a device whereby a varying resistance to the deflecting action of the wind is secured. The element in the mechanism by which this result is obtained is a lever pivoted at one end, with a weight at the other end, and so arranged that, when the wind-wheel begins to deflect or turn out of the wind, the weighted lever hangs in a nearly perpendicular position; but, as the wheel swings out of the wind, it raises the lever, and as it is brought towards a horizontal position the resistance increases so that the wind-wheel, after having been thrown into a position oblique to the wind, will still work, instead of swinging fully into a position parallel to the vane. This patent has been reissued since the agreement of November, 1880, with five claims, the third and fourth of which are claimed to be infringed, and which read as follows:

"(3) The combination of a deflecting windmill, a pivoted tail-vane, and means for resisting the deflection of the wheel out of the wind, with a variable force proportionate to the extent of such deflection, substantially as described. (4) The combination of a deflecting wind-wheel, a pivoted tail-vane, and a weight of varying resistance, for the purposes herein set forth."

The validity of these broad claims in the reissue defendants have admitted, so that no matter what may be the relation of this patent

to the rest of the public, these defendants are estopped from denying their validity.

The defendant obtains a varying resistance to the deflection of the wheel by means of an upright leaved steel spring, fixed upon the shank of the vane, and which is connected by a chain or cord with an arm extending from the wheel support, so arranged that, as the wheel is deflected, the strain upon the spring is resisted by the increased stiffness of the spring, thereby holding the wheel in an oblique position to the wind until the force of the wind becomes sufficient to entirely overcome the resistance of the spring, and bring the wheel into a line parallel to the tail-vane, where it will be held until the force of the wind abates, when the action of the spring will bring the wheel back either fully or obliquely into the wind. I think this device is clearly within the third and fourth claims of the W. H. Wheeler reissue. It is in all respects an equivalent of the W. H. Wheeler device, both in function and mode of operation, and as the defendants are precluded by their agreement from contesting the validity of this reissue, they must be held to infringe.

The Perkins patent is for a device whereby the weight of the tail-vane is made the force for keeping the wheel into the wind, and is an adaptation of the old and well-known device for a self-shutting gate or door, by causing the gate or door to be lifted as it swings, so that its weight will be exerted to bring it back to its closed or normal position. To some extent the tendency of the defendant's spring and chain is to lift the further end of the vane; that is, if there is any room for play of the vane-thimble on the wheel-support. It is quite evident, however, that this lift of the vane by means of the spring and chain, in defendant's combination, is a mere incident, rather than any part of the purpose of the device; while the Perkins vane is wholly organized to accomplish this lift as a mode of utilizing the weight of the vane as a resistance to the deflecting force, as a means of overcoming such force.

The Perkins patent has been reissued twice: original patent No. 93,472, dated August 10, 1869; reissued October 9, 1872; and again reissued October 8, 1878, on application filed June 4, 1878.

There is no controversy in the case as to the validity of this reissue; but, passing on this in the light of late cases involving reissues, much doubt might exist as to the validity of the patent, and the defendants are not estopped by any agreement from denying the validity of the Perkins reissue. That question I do not care to discuss, as I do not think the defendants infringe the Perkins patent.

I therefore find that defendants infringe the third and fourth claims of the W. H. Wheeler patent, and that they do not infringe the L. H. Wheeler and Perkins patents.

## BACKUS WATER MOTOR CO. *v.* TUERK and others.

(*Circuit Court, N. D. Illinois.* July 10, 1883.)

1. PATENTS FOR INVENTIONS—INFRINGEMENT—NOVELTY.

The pocket device shown in the sixth claim of reissued patent No. 5,590, dated October 7, 1873, granted to Isaac Hyde, assignor of O. J. Backus, for an "improvement in combined water-wheels and sewing-machines," (original patent having been issued September 24, 1872, No. 131,616,) is void for want of novelty, having been clearly shown in the provisional specifications of James Pilbrow for English letters patent in 1857.

2. SAME—WATER MOTORS.

The first claim in letters patent No. 146,120, dated January 6, 1874, issued to O. J. Backus for an "improvement in water motors," is void for want of novelty, and the second therein made is not infringed by the Tuerk water motors, claimed to be an infringement of the Backus patents.

In Equity.

*Munson & Phillip*, for complainant.

*P. C. Dryenforth*, for defendants.

BLODGETT, J. This is a bill to restrain the alleged infringement of reissued letters patent No. 5,590, dated October 7, 1873, to Isaac Hyde, assignor of O. J. Backus, for an "improvement in combined water-wheels and sewing-machines," the original patent having been issued September 24, 1872, No. 131,616, and of patent No. 146,120, dated January 6, 1874, issued to O. J. Backus, for an "improvement in water motors." The defendants are charged with the infringement of the sixth claim of the reissued Hyde patent, and of the first and second claims of the Backus patent. The defenses set up are—*First*, that the patents in question are void for want of novelty; *second*, that the reissued Hyde patent is void, by reason of its describing a different invention from that contained in the original patent; and, *third*, that the defendants do not infringe.

The sixth claim of the Hyde patent is as follows: "A vertically revolving water-wheel, in combination with an inclosing case, which has a projecting spent-water pocket, D, to prevent the spent water from acting on the wheels, substantially as described." The drawings and model of the Hyde patent show an elongation downward of the wheel-casing, so as to give room for the escape of the spent water, without its huddling or otherwise retarding the motion of the wheel; and this feature of the Hyde device is specifically covered by the sixth claim of the reissued patent, it not having been claimed in any form in the original patent. The defendants manufacture a water motor, the wheel of which is inclosed in a metal case, in one form of which there is an elongation of the case downward, so as to give room for the free escape of the spent water. Their other form of wheel-case is nearly circular. The wheel, however, in the circular case is set eccentrically to the center of the case, so that a larger space is left below the wheel than above it, and from this larger space the