

case. The question before the jury was not what Wilgus may have thought of his own invention in 1888. The evidence was properly excluded.

Error is claimed in the ruling of the court allowing the witness Townsend to answer the following question: "With reference to the tangential inlet spoken of by Mr. Graff, what is the shape of the tangential inlet in the sprinkler?" The response of the witness was, in substance, that the inlet in the Wilgus sprinkler was circular in shape, while the other was not. It is possible that this evidence was wholly immaterial, since no claim is made in either of the patents upon the shape of the inlet, and no reference is made thereto in the specifications, and it is probable that the shape of the inlet had no bearing whatever upon the issues in the case. The sprinklers, as actually constructed under both patents, were in evidence before the jury, however, and the shape of inlets in each could be distinctly seen, upon inspection of them. This evidence of the witness added nothing to what was already admitted before the jury, could not affect the issues, and could not in any way have prejudiced the rights of the plaintiff in error.

It is claimed that the verdict was contrary to the charge of the court, and that the jury disregarded the following instruction:

"A mere carrying forward, or a new or more extended application, of the original thought, and changed only in form, proportion, or degree, or substitution of equivalents doing substantially the same thing, in the same way, by the same means, with better results, is not such an invention as would sustain a patent."

It is impossible for us to say that the jury disregarded this instruction. There is nothing in the bill of exceptions to show that they did. The presumption is, on the other hand, that they strictly observed it. We must infer that the jury, in the light of the evidence, obeyed the charge of the court, and that in arriving at their verdict they reached the conclusion that the Wilgus patent was not a mere carrying forward of the original thought of the Gauthier patent, and that the two sprinklers do not accomplish substantially the same things, in the same way, by the same means. This was the main question in issue in the case, and was, as we have seen, submitted to the jury without objection upon the part of the plaintiff in error.

There being no error in the trial below, the judgment is affirmed, with costs to the defendant in error.

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JONATHAN MILLS MANUF'G CO. v. WHITEHURST et al.

(Circuit Court, S. D. Ohio, E. D. July 6, 1893.)

No. 632.

1. PATENTS FOR INVENTIONS—ASSIGNMENT—WHAT CONSTITUTES.

An inventor having assigned his patent to a corporation, the latter, in consideration of \$1,000 cash, and a note of \$1,000 made to it by the inventor, agreed, in writing, to assign the same to a third person. In this agreement it was stipulated that the assignee should "sell the property," and apply the proceeds—First, to pay \$1,000 to the inventor; next, to pay his \$1,000 note; and, last, to pay him any balance remaining. This contract was signed by the corporation and its assignee. Subjoined was a

declaration signed by the assignee and the inventor, stating that the former held the property as trustee for the latter, and as security for money due. *Held*, that although this was, in terms, merely an agreement to assign, yet, as it was a complete agreement of sale, it was sufficient to pass the title to the assignee; the sale being upon a condition subsequent, which did not affect his title.

2. SAME—EQUITY JURISDICTION—REMEDY AT LAW—INJUNCTION.

The owner of an unexpired patent is entitled to an injunction against an infringer, notwithstanding that the latter is a mere user, and equity jurisdiction cannot, therefore, be defeated on the ground of an adequate remedy at law.

3. SAME—ANTICIPATION—BOLTING MACHINES.

Letters patent No. 267,098, issued November 7, 1882, to Jonathan Mills, cover an improved flour-bolting machine, consisting of an outer case, a rotating bolting-cloth cylinder, an inner drum about six inches less in diameter than the interior of the bolting cylinder, and provided with "flier blades" or elevating devices, which may be made of angle iron, and inclined backwardly from the radial line, with reference to the direction of motion; these blades to be set in continuous lines across the face of the drum; the lines to be preferably of spiral form, like the twist of a rifle. *Held*, that the patent was not anticipated by patent No. 184,821, issued November 28, 1876, to Bernheisel and Young, which shows the ordinary centrifugal reel, provided with a shaft which carries two sets of floats,—an outer one for the purpose of throwing the meal against the cloth, and an inner set operating as fans to establish an outward current of air, but not constituting a continuous imperforated drum, equivalent in function to the drum of the Mills patent.

4. SAME—ANTICIPATION.

Nor was the Mills patent anticipated by English patent No. 3,013, of 1879, to William W. Dach, for a "chop cooler," having for its principal object "to remove the heated air which accompanies the meal from the grinding or disintegrating apparatus," and employing for this purpose a rapidly-revolving perforated metal cylinder, provided with screw blades and an air-exhaust fan.

5. SAME—SUITS FOR INFRINGEMENT—ESTOPPEL—LACHES.

In a suit for infringement of the Mills patent it appeared that no machines had been made in strict accordance therewith, but that all machines manufactured and sold were made in accordance with patent No. 474,916, issued to Mills May 17, 1892, on an application filed May 17, 1885, for an improvement on the original invention. This improvement consisted in substituting for the "flier blades" of the original patent V-shaped ridges secured to the drum, and arranged so closely together that their adjacent sides form V-shaped troughs extending longitudinally along the drum between each pair of ridges. *Held*, that these facts did not show abandonment, or laches, or constitute an estoppel, for, although complainant owned both patents, it had a right to sue on the earlier one, and, as the improvement was merely a change in form, any infringement of the later patent would also be an infringement of the earlier one.

In Equity. Suit by the Jonathan Mills Manufacturing Company against M. C. Whitehurst and others for infringement of letters patent No. 267,098, issued November 7, 1882, to Jonathan Mills, for an improvement in machines for bolting flour. Decree for complainant.

Poole & Brown, for complainant.

George J. Murray, for respondents.

SAGE, District Judge. The patent involved in this cause was granted November 7, 1882, to Jonathan Mills, for certain improvements in machines for dressing or bolting flour. The specification covers more than six pages of the letters issued from the

patent office. There are 14 claims, of which the 1st, 2d, 3d, and 6th are averred to have been infringed by the defendants. The patent is, in terms, for a "centrifugal bolt." The claims referred to are as follows:

"(1) In a horizontal centrifugal bolt, the combination of an outer shell; a reel; revolving, longitudinal, continuously arranged flier blades; and a central drum having a close or continuous peripheral surface,—together arranged, and operating substantially as described, and for the purposes set forth.

"(2) In a horizontal centrifugal bolt the combination with the outer shell and reel of a flier having a number of longitudinal troughs or recesses in its circumferential surface, said troughs being closed at their bottom, and embraced laterally by longitudinal, spirally-directed flier blades, whereby the material falling into said recesses is prevented from falling to the bottom of the reel, substantially as described, and for the purposes set forth.

"(3) In a horizontal centrifugal bolt, the combination with the outer shell, and with the reel, of a flier consisting of a peripherally closed drum proximating in diameter that of the reel, and provided with longitudinal, spirally-directed blades, applied to the circumferential surface thereof, substantially as described, and for the purposes set forth."

"(6) In a horizontal centrifugal bolt, the combination of an outer stationary shell, and inner rotating bolting reel, and a central drum having a close or continuous peripheral surface, said drum being provided with longitudinal blades on its peripheral surface, arranged to operate together as a continuous blade, or series of continuous blades, and having a rotary motion in the same direction with, but at a higher speed than, the reel, whereby material being bolted is prevented from overloading the bottom of the reel, substantially as described."

A "bolt," in flour milling, as it was known until a few years prior to the device set forth in the patent sued upon, was a cylindrical, hexagonal, or prismatic hollow structure, mounted upon a revolving shaft, and consisting of a skeleton frame over which was stretched bolting cloth of the degree of fineness required for the particular work to be done. The bolting cloth was generally in pieces or sections, closely fitted to each other, and of different fineness,—the closer woven or finer at the head, and the coarser at the lower part or tail, of the bolt. The material was fed in at the head, which was set somewhat higher than the tail, so that by the rotation of the bolt it was, little by little, conveyed to the tail. The fine portion of the material would be sifted out or bolted, and the coarser retained until finally discharged at the tail. By the constant revolution of the bolt the sifting process was greatly facilitated, and the larger meshes in the bolting cloth, as the material approached the lower end of the bolt, allowed the coarser particles of flour to pass through, while the bran and offal were retained. It was found that the operation of this bolt was not complete. It did not entirely separate the flour from the bran, but would "tail off" good stock. The speed with which the material introduced into the upper end of the bolt would pass through to the lower end was such that a considerable portion of the flour would be carried off through the lower end, without having been subjected to the proper sifting action. To remedy this defect the bolts were lengthened to 12, and afterwards to 20, feet. Even then they were of limited capacity, and of imperfect yield, for the reason that the work of sifting was done in a small part, only,

of the circumference of the bolt. The cylindrical bolt was first in order of time. Then the hexagonal, or sometimes the prismatic, was introduced. But, aside from the defects already stated, they were all objectionable, because of the space they occupied, and of the large amount of bolting silk required, and its cost. Then was introduced the centrifugal bolt, a slowly revolving, bolting-silk cylinder, located within an outer inclosure, as all the bolts were, and containing a series of revolving beaters, consisting of flat wooden blades supported by two or more spiders or wheels located in the cylinder, and near its ends. These beaters, called also "fliers" and "beater blades," were caused to revolve at the rate of from 200 to 400 revolutions per minute, within the slowly-revolving silk cylinder. The action of this bolt was altogether different from anything that preceded it. As the material passed from the head, where it was introduced, to the tail of the reel or bolt, it was subjected to a continuous beating action, which imparted to it a centrifugal motion and direction, forcing it against the bolting cloth at all portions of the circumference, and thus largely increasing the capacity of the bolt. As a consequence the bolt was shortened to about 8 or 10 feet. The advantages were that the bolt occupied less space; that its capacity was increased, and the soft, flake-like material was broken up by the beating action, and the flour dusted or blown off from the bran, and a larger yield obtained. The disadvantages were the greater wear of the bolting cloth, which had to be frequently replaced, and the severe scouring and beating action of the coarse middlings, which forced bran specks and other impurities through the interstices. For these reasons the centrifugal bolt was generally used for the purpose of producing a finish, and the cylindrical or hexagonal for making the best quality of flour. There is testimony that the action of the beater blades had a tendency to make a quantity of fine flour dust, which, not having the qualities of rising, was detrimental to the baking qualities of the flour. It also produced an uneven flour, a part of it being forced through the silk in coarse granules, and a part reduced to a very fine powder, whereby its market value was lessened.

The next improvement was made by Jonathan Mills, to whom, on the 7th of November, 1882, the patent in suit, No. 267,098, was issued. It consists of an outer case; a rotating reel or bolting-cloth cylinder; an inner drum or imperforate cylinder of external diameter, say about six inches less than the interior of the bolting reel frame, and provided with blades or elevating devices which may be made of angle iron, and so attached to the drum as to hold the projecting flange somewhat inclined backward, with reference to the direction of motion, from a radial line of the drum. These blades are preferably about an inch and three-quarters in width, and from six to eighteen inches long. The apertures through which they are secured to the drum are in slot form, so that they may be set at any desired inclination from a direct longitudinal line. Their number may be as desired, and they may be set in longitudinal series or out of line, as preferred; but in either case,

in order to obtain the full capacity of the bolt, each line of blades must be continuous, and of the full length of the drum. Ordinarily, according to the specification, they should be set spirally,—some-what like the twist of the rifle in a gun. The specification contains suggestions of modifications of form and position of the blades to facilitate rapid feeding, and to induce and direct currents of air, but these are details of construction and adjustment, not necessary for the present consideration.

The first defense is want of title in complainant.

On the 23d day of January, 1883, Jonathan Mills, the patentee, assigned all his right, title, and interest in and to the patent in suit to the Phoenix Foundry & Machine Works, a corporation having its home office and principal place of business at Terre Haute, Ind. On the 18th of December, 1883, the Phoenix Foundry & Machine Works, "in consideration of \$1,000 cash in hand paid, and for a note for \$1,000, due in six months, made by Jonathan Mills to the Phoenix Foundry & Machine Works," agreed, in writing, to assign to Myron W. Clark the patent in suit, and certain other patents and rights and personal property. It was stipulated in the agreement that Clark should sell "the said property," and apply the proceeds—First, to the payment of \$1,000 to Mills; second, to the payment of said note made by Mills; and, third, to pay to Mills any balance or surplus. Then follows a provision that no liability shall attach to Clark, excepting to account for proceeds of sales, and the Phoenix Company, "in assigning said property, guaranties no value thereto." This contract is signed by the Phoenix Company and by Clark. Subjoined is a declaration, signed by Clark and by Mills, that Clark holds the property as trustee for Mills, and as security for the payment of \$1,000 due him by Mills, and to be retained from the proceeds of sales, which, however, were not to be made within six months without his consent. Then follows the substitution on the 21st of June, 1884, by Mills, of George T. Smith for Clark, as trustee. Meantime, on the 20th of December, 1883, Clark had assigned to Smith, in consideration of \$1,065, the patent in suit, and certain other patents included in the assignment to him by the Phoenix Company, but not still other patents and certain personal property included in said assignment. On the 15th of August, 1892, Smith, in consideration of \$100, assigned the patent in suit to Charles Wardlow, of Columbus, Ohio; and, on the next day, Wardlow, in consideration of one dollar and other valuable considerations, assigned the same to the complainant. By an instrument in writing, not dated, but recorded in the patent office July 1, 1891, Jonathan Mills, in consideration of one dollar and other valuable considerations, assigns all his interest in said patent to the complainant. This assignment contains a stipulation that the complainant should pay 10 per cent. of all royalties collected by it "for infringements" to Mills.

The contention for defendants, that the assignment by the Phoenix Company to Clark is only an agreement to assign upon a stipulated condition, which is not shown to have been complied with, and that it did not pass the legal title, is not well founded.

For the assignment of a patent, "no particular form is required; but still there must be some operative words, expressing at least an intention to assign, in order to constitute an assignment." *Campbell v. James*, 17 Blatchf. 42-54. There is a complete agreement of sale, which is all that is necessary to pass the legal title of personal property, as between the parties. The agreement contains, also, a stipulation for the sale of the property, and application of the proceeds by Clark. This, however, was a condition subsequent, attached to the sale, but not affecting his title. It is evident from the entire contract that Clark took the title in trust, with a power of sale, which he exercised, and thereby conveyed a good title to his vendee, from whom, by mesne assignments, the complainant acquired a good title. The release by Mills to the complainant, containing mutual stipulations, is incomplete, in that it was not signed by complainant; but it was accepted and recorded by complainant, and, if not thereby made binding, it is enough to say that complainant's title was good without it.

The second defense, that the complainant has an adequate remedy at law, and therefore is not entitled to sue in equity, must be overruled. *Crandall v. Manufacturing Co.*, 24 Fed. Rep. 738, which is specially relied upon, was a suit against a licensee for royalties, and has no application here. *Nor has Root v. Railway Co.*, 105 U. S. 189, where the patent had expired. The defendants are users, not manufacturers, but, if infringers, they may be enjoined; and that disposes of the objection to the jurisdiction.

The next defenses are abandonment, laches, and estoppel. These may be considered together. It is set up in the answer that no machine has been made or offered for sale by the complainant, or any of its assignees, constructed in accordance with the patent in suit. This is literally true, but it is not all the truth. It appears from the evidence that Jonathan Mills was not financially able to construct and put upon the market any such machines. All the machines made and sold have been constructed under the Mills patent of May 17, 1892, (No. 474,916,) issued upon an application filed September 23, 1885. This patent is for an improvement on the patent in suit, but not essentially dissimilar from it. Each has the inside drum provided with elevating devices. In the patent of 1882 these are called "flier blades," and shown to be relatively wide, thin pieces of wood, standing radially on the drum, while the 1892 patent shows them to consist of V-shaped ridges secured to the drum, and arranged so closely together that their adjacent sides form V-shaped troughs, extending longitudinally along the drum between each pair of ridges. The difference is only in form, and no one could make or use a machine under the patent of 1892 without coming within the patent of 1882. *Machine Co. v. Murphy*, 97 U. S. 120, is a sufficient authority on this point. The 1892 patent is owned by complainant, but the complainant preferred, as it had the right, to bring this suit under the patent of 1882, which is as available for that purpose as if all the machines had been constructed in strict accordance with its specification and claims. Had this suit been brought under the patent of 1892, the patent of 1882

would have been pleaded—and pleaded successfully—in anticipation. The defenses of abandonment, laches, and estoppel are overruled.

The case depends upon the validity of the patent in suit, and upon whether the defendants are infringers.

The answer sets up a large number of patents in anticipation. Of these, two are specially relied upon,—No. 184,821, to Bernheisel and Young, November 28, 1876, and English patent No. 3,013, of 1879, to William W. Dach. These are referred to by defendants' expert as the best anticipations of the claims of complainant's patent averred to have been infringed by defendants. It will not be necessary, therefore, to consider any others. The Bernheisel and Young patent shows the ordinary centrifugal reel, provided with floats carried on a central shaft, and preferably constructed of two boards, with an open space between them. These serve to throw the meal against the cloth, and also as "auxiliary fans to establish an outward current of air" whenever the slide over an aperture provided for the admission of air to the interior of the reel, as required in the operation of the machine, is open. There is also an exhaust fan driven by a belt leading from a pulley on the end of the shaft, and inducing an upward current of air. It is stated in the specification that "in falling through these currents the middlings will be purified by the removal of the fine, pulverulent impurities which are mingled with granular particles." The shaft is provided with two collars, from each of which project, radially, bars of metal. To each pair of these are attached two longitudinally extending "floats" or blades set at an angle to each other, the radial bars of metal being bent for the purpose. The outer blades operate in the same manner as the blades of the ordinary centrifugal bolt, while the inner blades, adjusted to a different angle, produce, when the machine is in operation, "the necessary auxiliary fan action." The inner blades do not constitute a drum, in fact, nor were they so intended. It was urged upon the hearing that, when in operation, the material could not fall through into the space about the shaft, and that is probably true, when the revolutions are rapid enough; but one object—and a great object—of the complainant's device is to accomplish the bolting by slow revolutions. The blades do not constitute the sides of troughs, because the spaces between them are open. This device does not anticipate the complainant's patent.

The English patent is for three inventions. The first two relate to roller mills and disintegrators. The third is for a "chop cooler," having for its principal object "to remove the heated air which accompanies the meal from the grinding or disintegrating apparatus." For this purpose the patentee employed a rapidly-revolving cylinder, of perforated steel or metal, provided with screw blades. This was covered with flannel, or other suitable material. The air was then exhausted from within the cylinder by means of a fan. Three experts—two of them practical millers—called by the complainant testify that in their opinion a machine constructed according to the specification of the English patent would be inoperative, and there is no testimony that such a machine ever was constructed,

or put in operation. All the witnesses agree that the fan must be run at a very high rate of speed—not less than five or six hundred revolutions per minute—to make it effective as an air exhaust. The English machine, if operative, is primarily a chop or meal cooler; the complainant's, a bolter, and not possibly a cooler. The English machine requires an interior perforated drum; the complainant's, a closed drum. The blades on the English machine are not continuous. They cover only about three-fifths the length of the drum. The complainant's blades extend the entire length of the drum, and must be continuous. The English machine shows disintegrator pins projecting inwardly from the cloth cylinder in the spaces between the ends of the blades, and calls for hollow gudgeons at each end of the perforated drum. It has no feed spout, or other means for supplying materials; nor does it show, nor is there suggested, any means for taking off the bran and offal. The construction is such as to permit dust and fine flour to pass into the inner perforated drum, and be exhausted through the fan, and lost. In all these, as well as in other, respects, it differs from the complainant's machine. The testimony is that these differences are material, and the fact is that, although defendants, called to account as infringers of complainant's patent, may be fertile in suggestions of how the English patent might be so modified and reconstructed and adapted as to amount to an anticipation, to one looking forward, and having no knowledge of complainant's machine, it would not suggest the slightest conception of the great improvement embodied in that machine. The English patent cannot be recognized as an anticipation. In the opinion of the court the complainant's patent is valid. The evidence clearly establishes that the defendants' machine is an infringement.

The decree will be for the complainant, with costs.

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#### CURTIS v. ATLANTA ST. R. CO.

(Circuit Court, N. D. Georgia. December 17, 1892.)

#### PATENTS FOR INVENTIONS—INFRINGEMENT—STREET-RAILROAD CHAIRS.

Letters patent No. 312,259, granted February 17, 1885, to Benjamin F. Curtis, were for a street-railroad chair, constructed of cast iron. The top was provided with a cheek at one end, having an inwardly projecting flange extending over the foot of the rail, and a short cheek, without a flange, at the other end. The flange clamped the foot of the rail, and the other cheek prevented the rail from slipping from its place. All chairs were cast alike, but were placed on opposite ends of the ties, in reversed positions, and were spiked to the ties. *Held* that, in view of the prior state of the art, this was not infringed by letters patent No. 316,995, granted May 5, 1885, to A. J. Moxham, for a wrought or forged metal chair of a box form, having diagonal lugs formed by cutting the metal, and shaping it in dies to fit the edge of the flanges of the largest sized rails, so that by skewing the chair the lugs would be made to clamp, and securely hold, the lighter and smaller rails.

In Equity. Suit by Benjamin F. Curtis against the Atlanta Street-Railroad Company for the infringement of letters patent No. 312,259, issued February 17, 1885, to Benjamin F. Curtis, for a "street-railroad chair." The alleged infringing chair was