

C. & A. POTTS & CO. v. CREAGER et al.

(Circuit Court, S. D. Ohio, W. D. November 23, 1896.)

No. 4,244.

1. PATENTS—INVENTION—ADAPTATION TO NEW USE.

Where the disintegration and shredding of clay had been accomplished by means of bars running across the face of rollers, *held*, that no invention was involved in adapting a mill for grinding or grating apples to the purpose of disintegrating and shredding clay, where the only change required was the substitution of bars of steel running across the face of the roller, parallel with the axis, in place of rows of thick steel knives.

2. SAME—ANTICIPATION—CLAY DISINTEGRATORS.

The Potts patent, No. 322,393, for improvements in clay disintegrators, *held* anticipated, in view of the prior state of the art, by a mill of similar construction used for grinding or grating apples.

On Rehearing. This is a suit in equity by C. & A. Potts & Co. against Frank F. Creager and others for alleged infringement of patents Nos. 322,393, issued July 14, 1885, and 368,898, issued August 23, 1887, both to C. and A. Potts, for improvements in clay disintegrating machines. This court originally entered a decree dismissing the bill (44 Fed. 680); but, on appeal to the supreme court, the decree was reversed, and the cause remanded, with directions for further proceedings in accordance with the opinion there rendered. 15 Sup. Ct. 194, 155 U. S. 597. On the coming down of the mandate, this court entered an interlocutory decree, awarding an injunction and an accounting. Thereafter complainants filed a petition for leave to file a supplemental bill to bring in newly-discovered evidence, and for a rehearing. The petition for rehearing was granted (71 Fed. 574), and the cause has been accordingly reheard upon new evidence.

SAGE, District Judge. The question for decision upon rehearing is whether the prior patents and prior uses which are now for the first time presented to the court anticipate the complainants' patent. The only question which the court is at liberty to consider is whether the new evidence makes it clearly apparent that, if it had been in the record when the case was before the supreme court, the decision of the lower court dismissing the bill would have been affirmed. The testimony will be considered, keeping in mind that, in granting the motion for rehearing, the court said:

"The opinion of the supreme court will, of course, be recognized as the law of the case; and unless the defendants, upon the matters suggested in the application for rehearing, can make a case radically different from that presented to the supreme court, the rehearing will not avail. With this understanding and qualification, the petition for rehearing will be allowed."

Considering, first, the alleged prior uses in the order in which they appear in the brief for the defendants, the Moore disintegrator was used at Elizabethport, N. J., in 1878, and for five years thereafter, to grind clay for brick making. It was provided with two sectional rolls of equal size. Each section had a set of teeth along the entire circumference, equidistant from the sides, and had also

a smooth surface. The width of the teeth was one-half the width of the section, the remaining portion of which constituted the smooth surface. The teeth of each roll meshed against the smooth surface of the other roll, leaving a space of three-eighths of an inch between the smooth surface and the end of the teeth. These rolls were on shafts provided each with a gear wheel, one of which was smaller than the other, in order to obtain a differential speed of the two rolls. The clay was fed as it came from the clay bank, and, by being passed through the machine, was cut in shreds about an inch wide, and three-eighths of an inch thick, and about two inches long. The clay then went through a pug mill, and from the pug mill into the brick machine. The capacity of each machine was 100 tons of clay per day. This disintegrator establishes that the inventors of the complainants' patent were not pioneers in the art of disintegrating clay, as distinguished from crushing and grinding. The witness Rossi, who testifies to the Moore disintegrator, states also that, while at the Elizabethport factory,—that is, between 1878 and 1883,—he had a disintegrator constructed. They had in use at the factory a pair of smooth rollers to grind the clay, and the lumps did not feed through. The engineer, by direction of the witness, who was superintendent of the manufacturing company, cut grooves on the face of each roller, and inserted steel bars, so that, as they struck the lumps of clay, they kept them from sliding back. There were three bars for each roll. The rolls were 14 inches in diameter, and 11 and 12 inches long. The grooves were so cut that the bars were extended spirally across the face of the roller. These bars fed the clay through. The clay was cut into shreds, and from the rolls it went into the pug mill. It was not treated any after it was taken from the bank, and before it was passed through the rolls, which were in use about six months. When the company failed, they were disposed of with the machinery, which was sold at auction. "The most of it went for old iron." The witness states that the arming of the smooth rolls with the square steel bars was suggested to him by the fact that, when he was a young man, his father owned a cider mill, and the apples were ground by a roller which had steel plates inserted in grooves cut upon its face, and ground the apples against a smooth stationary surface. In the clay rolls, one side of the groove was dovetailed, and the other side straight, and the bars which he had caused to be constructed were driven from one end of the roller to position, in the groove, and held at the ends by screws. The bars projected beyond the face of the roll in which they were set, at least, three-eighths of an inch, and three-fourths of an inch from the face of the opposite roll. The testimony is that this disintegrator operated to cut the clay into shreds.

Upon cross-examination, it was brought out that the witness made an affidavit, which was produced by complainants, in which he stated that the Moore machine was so geared that one of its rolls made about 75 and the other about 90 revolutions per minute; that stones passed through it; that it was used to break up the large clods or lumps before putting the clay into the soak pit, where it

was left to absorb water and disintegrate, after which it was run through smooth rolls, to separate or crush the stones, then through a pug mill, and thence to a brick machine; that, moreover, the machine was a failure at first, because in 12 or 15 revolutions of the rolls it would become clogged and "stalled"; that they afterwards succeeded in providing a series of scrapers or cleaners, which, when attached to the machine, operated to prevent the clogging. He further stated that the machine had been discarded, and another machine substituted.

The witness also testifies that he used a Watson machine for disintegrating. This machine was built in January, 1881, by Thomas Lingle, as appears from the testimony. It differs from the Moore machine in that the teeth are round, and set in rows, projecting about an inch beyond the face of the roll; the rows on one roll working between the rows of its companion roll, the cylinder between the rows forming the abutment. This machine was used by the Watson Company for several years, and then for several years by the witness, who bought it from them. Rossi, in the affidavit above referred to, stated that, after the clay was passed through the Watson machine, it was run through a pair of small rolls, then through a pug mill, and then to the brick machine; that it was run through the small rolls, which were smooth, to rid it of stones which passed through the Watson machine, and had to be separated from the clay before the clay was put into the brick machine; that one of the rolls in the Watson machine made about 75 revolutions per minute, and the other about 90; and that that machine was also discarded, and replaced by other machines. That the Moore machine and the machine which the witness Rossi had constructed, and which he used at Elizabethport, accomplished the shredding of clay, is established by the testimony. What bearing that fact should have in this case will be considered later on.

The next alleged prior use is the mill devised by George Archenbronn, and constructed at Jackson, Mich., under his supervision, in September, 1881, for grinding apples. It was provided with a cylinder shell of $\frac{1}{4}$ inch thickness, 11 inches in length, by 12 inches in diameter. It had 4 concaves arranged to be pressed against the cylinder by levers and weights. There were 8 knives fitted in the cylinder, each 11 inches in length by $\frac{3}{16}$ of an inch thick. They projected beyond the face of the cylinder $\frac{3}{32}$ of an inch, were held in position by two rings on the outside of the cylinder, one at each end, and adjusted by set screws, one underneath each knife. The mill would grind 100 bushels of apples in 10 minutes. The roll was driven at a speed of about 2,000 revolutions per minute. The concaves were hinged on an axle against a weighted arm to hold them up to the cylinder. The weighted arm was swung on a bolt which acted as a pivot, so regulated by the weight as to allow hard substances coming in contact with the cylinder to pass through. It is in testimony that the Archenbronn roll would be appropriate for the reduction of clay if used in a properly constructed machine, and that it suggested to McKinley the idea of using it in a clay

machine, and McKinley communicated this suggestion to John S. Smith, who on May 26, 1886, made an application for a patent for an improvement in clay disintegrators (serial No. 202,957), which were provided with two rolls, or "roll crushers," to use his own expression,—one large and one small roll, the small roll armed with steel bars, and the two running at differential speed. His testimony is that he commenced making the model (one-third the size of the working machine) in June, 1885, and went to work constructing the large machine in the fall of that year. The model was first tried without the steel bars, and did not prove satisfactory; and he put bars on the small roll and the machine worked all right. He ran the small roll at about 1,000, and the large roll 150, revolutions per minute. By experiments, it was ascertained that the high speed kept the small roll clean from plastic clay by centrifugal force, while a low speed would allow the clay to stick to and clog the roll. In 1887 he sold his invention to the complainant company, for \$350, conceded to them priority of invention, and withdrew his application for a patent in their favor. The machine shown in complainants' first patent was constructed early in 1884, while the double roll machine, or the machine described in the second patent, was devised and experimented with in the early summer of 1885. Smith's date for the beginning of the construction of his model is June, 1885, and of the full-sized machine is in the fall of that year. But it appears from his testimony that the model was first tried without the steel bar, and did not prove satisfactory; and then the bars were put on, and the machine was all right. Taking this testimony altogether, it is not sufficient to establish anticipation of either of complainants' patents, and it may be dismissed from further consideration.

We come now to the patents for the disintegration of clay and other analogous substances, set up in the defendants' petition for rehearing. The first is the patent to Gregg, 1867. This shows two conical smooth rolls, which revolve at differential speed, breaking and disintegrating the clay subjected to their action.

The next was granted to Thomas Mills and George M. Mills, June 10, 1873, for an improvement in machines for granulating coconuts and other like substances, by the combined action of a toothed cylinder, a grooved plate, and a toothed roller. The disintegrating cylinder, as it is termed in the specification, is secured to a shaft, and situated between vertical plates; the ends of the cylinder revolving in such close contact with the plates that no granulated material can pass between them. In grooves in the circumference of the cylinder, and parallel with the line of the shaft, are secured, at equal distances apart, bars having triangular teeth, which project from the face of the cylinder; and, as the latter revolves, these teeth pass through angular grooves formed in the upper edge of an inclined plate, secured to the lower frame of the machine. The angular grooves in the plate correspond in number and shape with the teeth which pass close to the plate without being in absolute contact therewith. The toothed roller is a feed

roller grooved both circumferentially and in a direction parallel with its axis, so that its entire surface is studded with small pointed teeth, as shown in the drawings. This roller is actuated by the wheels shown in the drawings, or by any other system of gearing, revolving in the direction opposite to that of the disintegrating cylinder, but at a much slower speed. The kernel of the cocoanut broken into nuts, and placed in a hopper suitably located, is fed to the machine, and carried by a feed roller to the revolving cylinder, the teeth of which scrape away the kernel, and impel the pieces downward, until they are arrested by the inclined plate above described, through the grooves of which the teeth of the cylinder must pass, and consequently further disintegrate the pieces of kernel already torn from the lumps in the hopper. The inventor states in the specification that the disintegration of the kernel is accomplished partly by the preliminary scraping action of the teeth of the cylinder on the lumps or kernel as they are slowly fed to it, and maintained in contact by the slowly revolving toothed roller, and partly by the combined action of the teeth of the cylinder and the recessed inclined plate; the efficiency of this action being insured by the presence of the feed roller, which maintains the partially disintegrated kernel in a position to be acted upon by the teeth of the roller in connection with the inclined plate.

The Gregg patent, dated April 17, 1879, for an improvement in disintegrating devices for pulverizing clay for brick making, is next shown. The specification states that the apparatus is designed to provide improved means for thoroughly crushing and disintegrating clay, and convert it to the proper condition for being supplied to the molds. The improvement consisted in the combination, with a pair of crushing rollers, of a rotating brush or shaft, armed with a series of flexible blades, and placed beneath the rollers, so as to act upon the clay passing between them, as set forth. The rollers shown in the drawings are tapered or conical and smooth, but it is stated that cylindrical rollers may be employed, if preferred, without departing from the substance of the invention. The rollers are driven by pulleys, and revolve at differential speed. The clay is fed from a hopper. A rotating brush, consisting of a series of elastic metallic blades or beaters, secured radially, and with their edges in the direction of rotation upon a shaft, is mounted in bearings on the frame of the machine, in line with and immediately beneath the line of contact of the rollers, and is rapidly rotated by means of a gearing apparatus described in the specification. The blades of the brush are made of gradually increasing length from one end of the shaft to the other, proportionately with and in reverse direction to the inclination of the conical rollers; so that the distance between its periphery and the peripheries of the rollers shall be uniform throughout its length. But the specification adds that, where cylindrical rollers are employed, the blades should be of the same length from end to end of the shaft. In operation, the action of the rapidly rotating brush blades upon the clay, which falls upon them from the rollers above, completes and

perfects the crushing operation, breaking up the bands and strips which may be produced by the rollers when the clay is plastic, and reducing it to a thoroughly comminuted state.

The Dodson patent, for a disintegrating machine, issued March 27, 1883, shows and describes a rotary part and a fixed abutment, composed of sections, between which the material to be disintegrated is operated upon, the rotary part having V-shaped circumferential ribs or projections, and the abutment having corresponding V-shaped grooves. The material to be disintegrated was introduced from a hopper, and disintegrated in pieces between the abutment and the rotary part. By adjusting the abutment, the degree of fineness of disintegration could be varied.

The Anderson patent, of September 13, 1881, was for a clay reducer and disintegrator, described to be for the speedy reduction of clay shale, feldspathic and granite rocks, and other like substances into a fine powder. This machine is provided with a shell of cast iron when clay alluvium or clay shales were to be disintegrated, and from steel castings when the harder substances were to be treated. There were two of these cylinders, which in position for use were vertical. They were 30 inches long, by 14 inches inside diameter, and joined side to side, with their contiguous sides cut away, forming in horizontal cross section a figure 8, and resting upon a base plate. A series of armed projections were formed as part of the shell extended inwardly, within the cylinders, to the length of about $3\frac{1}{2}$ inches. Two inner cylinders, about 7 inches in diameter, each fitted on a rotating shaft, and provided with projections similar to those of the outer cylinders, and meshing therewith, completed the reducing receptacle or chamber. In operating the machine, the materials to be disintegrated were shoveled into an adjustable chute, set at a suitable pitch to allow them to pass into the receptacle slowly and regularly, the inner cylinders being rotated. The gravity of the materials was impeded by the motion of the armed projections, and the high peripheral speed of the armed cylinders moving in opposite directions sufficed to effectuate the process of reduction. These are the only patents which are referred to by counsel for the defendants in their brief, and recognized by them as the most available for the defense. Looking at them, and at the prior uses hereinbefore referred to as indicating the state of the art, it must be conceded that the complainants are not to be classed as pioneers in the art of disintegrating clay, and that in this important respect the case as now presented is distinguishable from the case presented to the supreme court.

The defendants also put in evidence English patent No. 1,671, May, 1874, to Edwin Cook and others, for clay mills. This patent, however, was in the original record in this case, and was before the supreme court; and, although not specifically mentioned in the opinion, it is included in the general reference therein to "other patents," and it will not be further considered here.

The defendants also rely upon an extract from an English pub-

lication on bricks and brick making, printed at Birmingham in 1878, wherein, after a description of the method whereby raw material to be treated is deposited in a capacious hopper, the author uses the following language:

"The work of disintegrating and agglomerating the mixed mass of marl and rock commences immediately it is deposited in the capacious hopper just mentioned. Immediately beneath this are two heavy iron rollers, fixed horizontally, and each furnished, at certain intervals on its surface, with stout steel bars. These rollers are set so as to revolve with an intervening space of one inch, and, as the material from the hopper above passes between them, it is rapidly reduced to this gauge. It then falls, and passes between a second pair of rollers, set to a narrower gauge, being thus reduced to a still finer grain."

The extract does not specify how the steel bars were fixed, and its meaning is open to doubt, and capable of various constructions. This publication is without drawings, and does not disclose the device "in such full, clear, and exact terms" as are required under the authority of *Seymour v. Osborne*, 11 Wall. 516.

We come now to the question whether the complainants' machine is anticipated by any of the prior uses or patents relied upon for the defendants, and brought to the attention of the court for the first time on rehearing. I do not think that the Moore disintegrator anticipates the complainants'. There is, considering the two in the light of the decision of the supreme court in this case, a patentable difference. It does, however, establish that the inventors of the complainants' patent were not pioneers in the art of disintegrating clay, as distinguished from crushing and grinding. It is true that the surfaces of the rolls themselves were about two inches apart, but the space between the end of the teeth of each roll and the smooth surface of the other roll was only about three-eighths of an inch. The two rolls were run at a differential speed. It is also true that small stones would pass between the rolls, and that the clay was subjected to other treatment before it went into the molds; but it is shown that whether such further treatment was necessary would depend upon the clay used, and that, if free from rock and of the right kind, it would be completely treated and fitted for the molds by being passed between the rolls. This machine, while it was a disintegrator, was also to a certain extent a grinding and pulverizing machine; and, under the ruling of the supreme court in this case, it lacked the patentable elements secured to the complainants by the letters issued to them.

Next comes the machine constructed by Rossi at the Elizabethport factory, before 1883. The rolls on that machine were in use about six months, and until the failure of the company. The three steel bars of each roll were located spirally across its face, and intended to feed the clay through. These bars extended within three-fourths of an inch of the face of the opposite roll. This also is recognized as establishing that shredding clay was accomplished by its operation.

The Watson machine has already been referred to as accomplishing the shredding of clay.

The Archenbronn mill, constructed for grinding apples, and provided with a cylinder armed with eight knives, located on a line parallel with the axis of the cylinder, and across its surface, it is said, is almost a precise reproduction of the Butterworth mill, both being cider mills. The supreme court rejected the Butterworth mill, as an anticipation, for the reason that the knives had serrated or toothed edges, that formed chisel-shaped cutting projections, and operated to cut or grind the apples; the only point of resemblance between that device and the Potts patent being that knives were set on a periphery of the cylinder in much the same way as the scraping bars of the complainants' patent. The court held that the Butterworth patent could not have been used as a clay disintegrator without changes involving more or less invention. It appears by the testimony of two witnesses in this case that the Archenbronn knives, which were three-sixteenths of an inch thick and straight-edged, were adapted to shred clay. It further appears that that mill suggested to the witness McKinley, and through him to the witness Smith, the use of bars or rollers for the disintegration of clay for making brick. Taking these facts in connection with the fact that, by the Moore machine, the Rossi machine, the Watson machine, and by other machines above referred to, the disintegration and shredding of clay had been accomplished, and was not original with the inventors of complainants' machine, and considering also that the only material change necessary to make the Archenbronn roller not only operative, but permanently effective for the shredding of clay, was to make the knives thicker, or, in other words, to substitute bars of steel for the thick steel knives, the Archenbronn mill must be recognized as anticipating complainants' patents. I am not able to see that the mere substitution of the steel bars for the steel blade, in order to accomplish a known result,—i. e. the disintegrating and pulverizing of clay,—involves invention; and I do not understand that the supreme court has given its sanction to any such proposition. Upon the other hand, that court seems to have regarded it as indispensable that the use to which the complainants' rollers were to be put should be new, in the sense that it would supersede other methods of doing the same work; that is to say, that crushing the clay would be superseded by disintegrating and pulverizing it. The record now shows what the record before the supreme court did not show, that that use was not new, and, therefore, that that essential element of the complainants' invention was lacking, and that, by reason of that lack, their patents are invalid.

It is not necessary to consider separately the other patents. They are all recognized as bearing upon the state of the art, but not as anticipations.

The decree will be for the defendants.

NATIONAL HEELING-MACH. CO. et al. v. ABBOTT.

(Circuit Court, D. Massachusetts. February 2, 1895.)

No. 495.

1. PATENTS—INFRINGEMENT SUITS—DELAY AND ACQUIESCENCE.

A delay of five or six years, after knowledge of defendant's alleged wrongful acts, held not to affect the right to a preliminary injunction, where his proceedings had been the subject of dispute and negotiation during the whole period.

2. SAME—PRELIMINARY INJUNCTION—ESTOPPEL.

Neglect for over 10 years, by patentees who have assigned their patent in trust, to inquire into the terms of licenses which they know have been granted to third parties by their trustee, estops them, when sued for infringement by such licensees, from denying knowledge of the exclusive character of such licenses.

3. APPEALS FROM PRELIMINARY INJUNCTIONS.

Rule 22 of the circuit court of appeals for the First circuit (11 C. C. A. cix.; 47 Fed. x.) is to be accepted as an indication that the court will support in all respects the policy of the seventh section of the act establishing the circuit courts of appeals, as far as practicable, and will avoid closing the business of any defendant by an interlocutory injunction, when an appeal is taken and a supersedeas bond may be allowed, except in peculiar cases, where justice clearly requires otherwise.

This was a bill in equity by the National Heeling-Machine Company and the Ross Heel Company against William T. Abbott for alleged infringement of letters patent No. 220,920, issued October 28, 1879, to Henry A. Henderson and Hollis C. Paine, for an improvement in heel-trimming machines. The cause was heard on a motion for a preliminary injunction.¹

It seems that the original purpose of the patentees, Henderson and Paine, was the trimming of wooden heels, but after the issuance of the patent it was discovered that their machine could be used in connection with finishing leather heels. Shortly after the issuance of the patent, and on November 5, 1879, the patentees assigned the entire patent to their attorney, F. F. Raymond, as trustee, but without indicating on the face of the assignment who were the beneficiaries of the trust. On the day of the execution of the assignment Raymond granted an exclusive license to the patentees to use the invention for the purpose of making wooden heels only. This license provided that, on the application of Henderson and Paine, a new license should be granted to any one designated by them; also, that the new license, when issued, should cancel the one in existence. It appears that the general purpose had in view by the parties was that a corporation should be formed for the purpose of trimming leather heels, and that the patent, so far as it related to this use, was to be employed in forwarding this purpose. The National Heeling-Machine Company was accordingly formed, and subsequently the patent was assigned to it by the trustee. There is no controversy in relation to the leather-heeling business. In relation to the trimming of wooden heels, the purpose seems to have been that the patentees, Henderson and Paine, were to retain entire control thereof; and it was contended in this suit that this intention was not carried out by the papers executed. They denied knowledge of the fact that their assignment to Raymond in trust was an assignment of the whole patent, and testified that they signed the paper in blank, and it was afterwards filled up by Raymond. Both of them deny knowledge of the terms of Raymond's license to them, declaring that they had no knowledge or recollection of ever having signed such an instrument. On April 24, 1880, Raymond, as

¹ For opinion on final hearing, see 70 Fed. 54.