POTTS *ET AL. V.* CREAGER *ET AL.*

Circuit Court, S. D. Ohio, W. D. January 3, 1891.

1. PATENTS FOR INVENTIONS—CLAY SEPARATOR—INVENTION.

Letters patent No. 322,393, issued July 14, 1885, to C. & A. Potts for improvements in disintegrating clay, consisting of the combination with a revolving cylinder of steel bars, fitted into longitudinal grooves in its periphery, so adjusted as to present sharp corners projecting above the surface of the cylinder, and a strong plate mounted on a shaft, so as to swing in bearings on the frame, and alternately approach and recede from the cylinder, are void for want of invention, all the elements of the device being old, and their combination being merely the exercise of mechanical skill.

2. SAME.

Letters patent No. 368,898, issued August 23, 1887, to C. & A. Potts for improvements in disintegrating clay, consisting in the combination, with a rotating cylinder longitudinally grooved, and carrying cutting bars projecting beyond the grooves, of a smooth-faced rotating cylinder, adapted to carry the clay and hold it against the grooved cylinder, are void for want of invention, all the elements of the device being old, and their combination being merely an exercise of mechanical skill.

In Equity.

C. & E. W. Bradford, for complainants.

Jas. Moore, for respondents.

SAGE, J. This suit is for the infringement of claim 6 of patent No. 322,393, July 14, 1885, and claims 1 and 2 of patent No. 368,898, August 23, 1887, both issued to C. & A. Potts for improvements in disintegrating clay. The purpose of these improvements is to disintegrate clay by means of a revolving cylinder, against which the clay is automatically pressed, as hereinafter described. The machine consists of a cylinder mounted on a shaft, having suitable bearings on the frame which supports it, the cylinder being of such length as to nearly fill the space between the sides of the frame. A series of steel bars is fitted into longitudinal grooves in the periphery of the cylinder, where they are held by flush screws at each end, or other suitable means, that they may be so adjusted as to present a sharp corner projecting above the surface of the cylinder. Opposite the cylinder a strong plate is mounted on the shaft, so as to swing in bearings on the frame. The central part of this plate is cylindrical in outline, the upper portion presenting a straight surface and the lower portion presenting to the cylinder a curved surface, corresponding to the periphery of the cylinder. This plate is caused to oscillate in its bearings by means of an eccentric wheel.

The opposed sides of the cylinder and the upper and central portions of the plate form, together with sheet-metal end-plates which are secured to the frame, a trough, one side of which approaches and recedes from the other at intervals, and which has at the bottom a narrow opening of constant width.

The operation of the machine is as follows:

The upper end of the plate being swung back to the position furthest from the cylinder, the moist, untempered clay is thrown into the trough above mentioned. The cylinder revolving rapidly, successive portions are

removed from the mass of clay, and carried through the opening between the plate and the cylinder by the scraping bars. At the same time the upper portion of the plate moves slowly towards the cylinder, thus keeping the mass of clay in close contact with the cylinder as successive portions are removed. The finely divided clay, after passing through the opening between the plate and the cylinder, falls upon the lower curved portion of the plate, and from thence to an incline, which carries it away.

Claim 6 is as follows:

"In a clay disintegrator, the combination, with cylinder, A, having a series of longitudinal grooves of the scraping bars, *c,* adjustably secured in said grooves, for the purpose specified."

In patent No. 368,898 a plain cylinder, set oppositely to the cutting cylinder, and revolving therewith in close proximity, so that the raw clay may be fed, shredded, and discharged in an even and continuous manner, in readiness to be taken directly to the pug or other mill, is substituted for the swinging plate described in patent No. 322,393. This additional cylinder serves as a feeder, continuously pressing the clay towards the shredding cylinder, whereby an abutment is furnished for the shredding cylinder to act upon, which, while being unyielding and unchanging as to location, is at the same time continuously changing as to surface, distributing the wear evenly throughout the circumference of the periphery of the feed cylinder, and thus not operating to change or vary the width of the space between the two cylinders as rapidly as had resulted from the wear upon the plate in the old construction. The two cylinders being arranged in such a manner as to be adjusted towards or from each other, it is only necessary, when the feed cylinder becomes worn to such an extent as to render the space between the cylinders too wide for practical use, to adjust them until the space is reduced to the width desired, thus enabling the cylinder to be used for a long time; the wear upon its surface not resulting in changing the character of the abutment, as has been the case in the old construction, wherein the abutting portion of the plate would soon be worn into a flat condition, not suitable for practical use, requiring the substitution of a new one at considerable expense. The improved construction also obviated the objection of the clay sticking to the feeding device, the feeding cylinder being continuously rotated in one direction. Claims 1 and 2 of this patent are as follows:

"(1) In the supporting frame of a clay disintegrator, a rotating cylinder longitudinally grooved, and carrying cutting bars in and projecting beyond the grooves, in, combination with a smooth-faced rotating cylinder, adapted to carry and hold the clay against the cylinder having the cutting bars thereon, which latter cut or shred the clay, and pass the same between the cylinders, substantially as Set forth. (2) In clay disintegrators, the combination, with the main supporting frame and with the rotating cylinder fixed therein, and having longitudinal cutting bars projecting beyond the face there of, of a positive revolving com-

panion cylinder, fixed opposite thereto in said frame, and having a smooth face or surface, with which said cutting-bars directly cooperate to shred or clip the clay as the same is fed by and passed between said cylinders, substantially as described."

The defenses are, to the first patent, anticipation and want of novelty; to the second patent, anticipation, want of invention, and non-infringement. Respondents rely upon eight prior patents. The *first* of these is the Butterworth patent of 1865, for an apple-grinding machine or cider-mill, in which is employed a cylinder having its periphery armed with knives or cutters having serrated or toothed edges, which form a series of cutting projections, with chisel-shaped edges. These cutters are so adjusted as to project beyond the periphery of the cylinder.

Second. The Ennis patent, September, 1865, for a machine for preparing paper pulp, in which an engine roll is found having on its periphery a series of cutters set in grooves in the periphery of a cylinder, so as to be in close proximity one to the other.

Third. The Frost patent, April 3, 1866, for an improved construction of paper engine or pulping machine cylinders, which consists in so applying the grinding plates or knives that they may be moved outwardly from the circumference of the cylinder as they wear under the operation of grinding the pulp, provision being made to hold them firmly in position as adjusted.

Fourth. The Van Name patent, January 8, 1884, which shows a construction of the peripheral surface of a roller for grinding-mills, with alternating blades of hard and soft material, arranged in grooves around the surface, and parallel with the axis. The blades or cutting knives can be renewed from time to time, but no provision is made for adjusting the projection of their edges from the cylinder.

Fifth. The Peabody patent for a cotton-seed huller, showing a revolving cylinder around the periphery of which, at equal distances apart, are arranged knives, each having a chisel-shaped cutting edge, and adjustable for the purpose of increasing or diminishing the cut.

Sixth. The Mayfield patent, January 10, 1871, for grinding-mills. The knives of the cutting cylinder are arranged tangentially. The cylinder is longitudinally grooved and these grooves extend entirely through the rim of the cylinder, forming slots therein. The knives project inwardly through these slots, and are adjustably bolted inside the cylinder, the cutting edges of the knives projecting outwardly from the cylinder. These bolts engage in the knives so as to permit the adjustment of the projection. The May fields call their knives so "plane-bits;" half the knives having smooth, sharp edges, the other half corrugated ones.

Seventh. The Smith patent, for an apparatus for preparing wheat for grinding, employing a cylinder similar to the cylinder of the Mayfield patent, with a series of plane-bits projecting from its periphery; These plane-bits or knives are adjustably bolted by screws and slots within the cylinder while their cutting edges project through slots outwardly through the rim of the cylinder. The cylinder, however, instead of having the slots and knives its entire length, has the long knives made up of separate length sections, each knife being about half the length of the cylinder.

Eighth. The Rudy patent, March 9, 1875, for clay pulverizer, provided with solid fluted reducing cylinders, the grooves being either fine or coarse, and a single reducing cylinder, acting against the clay as it

rests in concave plate springs, after which it falls through a sieve; and descends to a second cylinder, and then to a third.

The respondent relies also upon the cylinder shown in model of Creager's wood-polishing machine as an anticipation. This is a cylinder or roller, provided on its periphery: with series of projecting strips of glass, not, different, materially, in form from the complainants' scrapers, and like them fitted into longitudinal grooves in the periphery of the cylinder. It appears from the testimony for the respondents that a machine constructed like the model which is in evidence was in successful operation on Canal street, in this city, in 1874. It was used for polishing or; "slicking" boards, which were run between the cylinder and a support and pressure roller journaled underneath, and connected with an automatic adjustable contrivance.

On behalf of the complainants it is said that the Butterworth machine could not perform the work of the complainants' machine, for the reason-that it operates against a yielding surface, and that the cylinder, if removed from a cider-mill and placed in a clay disintegrator, would not perform the office nor produce the result of complainants' cylinder, because of the sticky, adhesive condition of clay generally used in making brick, and that the knives, with their chisel-shaped edges, while fitted to perform the work of a cider-mill, would not be suited to the shredding of clay contemplated in complainants' machine. Suppose all this be granted. The question remains, is there any patentable difference? The strips of glass in the cylinder of Creager's woo-polishing machine are substantially of the shape of the steel scrapers in complainants' cylinder. "But," says the complainants' expert, "they are glass; they never would do, our work. Our scrapers, are steel." Exactly, but I is the substitution of steel for glass or, putting that aside, the substitution of steel scrapers for steel, chisel-edged knives, in adapting an old device for a new use, invention?

As to the substitution of steel for glass, the authorities, from *Hotchkiss* v. *Greenwood,* 11 Row. 248, down, including *Hicks* v. *Kelsey,* 18 Wall. 670; *Terhune* v. *Phillips,* 99 U. S. 592; *Gardner* v. *Herz,* 118 U. S. 192, 6 Sup. Ct. Rep. 1027; and *Brown* v. *District of, Columbia,* 130 U. S. 87, 9 Sup. Ct. Rep, 437,—settle it that that is not invention. As to the adaptation of a new use of what is to be found in the prior patents put in evidence by the defendants, the case of *Aron* v. *Railway Co.,* 132 U. S. 90, 10 Sup. Ct. Rep. 24, is a strong authority against the complainants. The supreme court adopt and concur in the statement of the law by Judge Wallace In the court below as follows:

"It rarely happens that old instrumentalities are so perfectly adapted for a use for which they were not originally intended as not to require any alteration or modification. If these changes involve only the exercise of ordinary mechanical Skill, they do not sanction the patent; and, in most of the adjudged cases where it has been held that the application of old devices to a new use was not patentable, there were changes of form, proportion,

or organization of this character, which were necessary to accommodate them to the new occasion."

Now as to complainants' patent No. 368,898. Every part of the combination there claimed is old. The rotating cylinder, longitudinally grooved, and carrying cutting bars in and projecting beyond the grooves, and the smooth-faced rotating cylinder employed as a feeder, are all found in the prior patents in evidence. Adjustably securing the scraping bars in the grooves is not claimed. If it were, that too is old. But the specification provides that the bars, instead of being replaceable, may be cast in pieces with the cylinder. There is nothing in fact new, excepting the substitution of steel bars for the glass projections on the Creager wood-polishing machines, already referred to.

But counsel urge that the complainants' machine accomplishes a new result, beyond the reach of any of the prior machines, and that not one of the cylinders shown in anticipation will serve the purpose of disintegrating clay,—all which may, for the sake of the argument, be admitted; and they cite cases to sustain their proposition that prior devices do not anticipate a patent unless they operate in substantially the same way to produce the same result. The cases cited support the conclusions reached therein upon the facts presented, but the claim that novelty and utility are conclusive of invention is, as a general proposition, misleading, They may be persuasive, and in some cases they are well-nigh conclusive, but it must be remembered that, without both novelty and Utility, the question between invention and skill cannot arise, and that is the question presented in this case. Every year, with the constant advance of skill in all the useful arts, novelty of construction is and ought to be less and less significant as an indication of invention.

If any authority be necessary in addition to cases already cited, it may be found in very recent decisions by the supreme court of the United States. See *Butler* v. *Steeled,* 53 O. G. 1090, 11 Sup. Ct. Rep. 25. That case was upon a patent for an improvement in bretzel cutters, being an improvement in moulds or dies for stamping or cutting out bretzels. The patent was held invalid by Judge BLODGETT, (27 Fed. Rep. 219,) who says in his opinion, which is quoted with approval by the supreme court:

"It is true, I doubt not, that it required considerable mechanical skill to make a die which would cut out a bretzel from dough so as to imitate a handmade bretzel, because the handmade bretzel is somewhat clumsily shaped, as the parts are bent, twisted, and laid upon each other; and it was undoubtedly a matter requiring some study, effort, and experiment to make, the shape of the die correspond with the external formation of the bretzel. This, however, seems to me not to involve invention, but mere mechanical skill. The cutter might be compelled to experiment some,—that is, cut several dies; but that is not invention. The proof also shows that a large number of persons, before these patentees, had attempted to make a machine which would cut bretzels, and considerable money and time seems to have been expended in efforts to produce such a machine; but the noticeable thing in regard to all these early efforts was the fact that most of those engaged in them were trying tot draw out and twist the dough by machinery, rather than to cut or

stamp dough from a flat sheet, while others were endeavoring to cut them with dies set in revolving cylinders; and as soon as the idea of cutting the

dough from a flat sheet was conceived, the difficulty seems to have vanished, and success followed the effort, as the only change made was to adapt the old letter dies to the shape of a bretzel."

Justice BLATCHFORD, speaking for the court, and calling attention to the language of the decision below, that most of the prior unsuccessful attempts to make a machine to cut bretzels were in trying to draw out and twist the dough by machinery, rather than to cut out the form of a bretzel by a single die from a flat sheet, or else were endeavoring to cut bretzels with dies set in revolving cylinders, adds:

"It also appears that those efforts were largely made in attempts to cutout the bretze] by two opposite dies, and that as soon as the idea occurred of cutting the dough by a single die from a flat sheet success came at once, by merely changing the shape of the old single die. It also appears, as suggested by the circuit court, that there was a prejudice against machine-made bretzels."

See, also, *Florsheim* v. *Schilling,* 53 O. G. 1737, 11 Sup. Ct. Rep. 20, (Nov. 10, 1890;) and *County of Fond du Lac* v. *May,* 53 O. G. 1884, 11 Sup. Ct. Rep. 98, (Dec. 15, 1890.)

These cases strongly support the conclusion of the court in this case that the bill must be dismissed, with costs, and it is accordingly so ordered.