Pickering Vs. Mccullough

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Appellant : Pickering

Respondent : Mccullough

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Pickering v. McCullough - 104 U.S. 310 (1881)
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Pickering v. McCullough

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APPEAL FROM THE CIRCUIT COURT OF THE UNITED

STATES FOR THE WESTERN DISTRICT OF PENNSYLVANIA

SYLLABUS

1. Reissued letters patent No. 6166, granted Dec. 8, 1874, to George Nimmo, for "an improvement in molding crucibles " are void, the invention therein described being neither patentable nor novel.

2. A combination of old elements is not patentable unless they all so enter into it as that each qualifies every other. It must either form a new machine of distinct character and function or produce a result which is not the mere aggregate of separate contributions, but is due to the joint and cooperating action of all the elements.

The facts are stated in the opinion of the Court.

MR. JUSTICE MATTHEWS delivered the opinion of the Court.

This is a bill in equity filed by the appellants to restrain the appellees from infringing reissued letters patent No. 6166, dated Dec. 8, 1874, to George Nimmo, for an improvement in molding crucibles and for an account, the patent having been reissued to the complainants as assignees of Nimmo, the inventor and original patentee.

The original patent, No. 49,140, granted to him, bears dated Aug. 1, 1865.

The subject of the alleged invention is an improvement in the manufacture of molding crucibles and pots, made of a plastic material composed of plumbago, or so-called black lead and fire clay, used principally in the manufacture of steel. They were formerly made by hand, on a common potter's

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wheel, the hand and eye of the skilled workman building them up in the desired shape as the material revolved upon the wheel. It is recited in the original patent to Nimmo that they had also been made in a mold by a pressing instrument, for which reference is made to letters patent, granted Oct. 26, 1852, to John Akrill. It is stated also by Nimmo in the specification to his original patent, that

"difficulty has heretofore been experienced in removing the crucibles from the mold in consequence of the adhesive nature of the black lead compound or mixture employed for such crucibles. The amount of water, also, that is required to make the mixture sufficiently plastic causes the material frequently to crack and break in shrinking as it dries."

The following is the description of the invention, as contained in the specification, referring to the drawing accompanying it:

"The nature of my said invention consists in the manufacture of crucibles in a plaster mold, which gives shape to the pot externally and absorbs the moisture from the pot, causing it to dry uniformly and at the same time shrink away from the mold, preventing the air acting on the outside of the pot until after the moisture has been mostly absorbed, and prevents the pot from splitting or cracking from unequal contraction in drying. I mount my plaster mold in a revolving chuck, and employ a rib attached to a lever for spreading the plastic crucible material on the inside of the mold, and at the same time hardening, consolidating, and polishing the crucible on the inside by means of said rib."

"In the drawings is a bed carrying the vertical spindle, on the upper end of which is the hollow chuck, into which the plaster mold fits, and these parts are revolved by a belt to a wheel and crank or by any other competent means. Near the chuck is an upright frame, with rollers over which the chain or rope passes, on one end of which is the counterweight and on the other the lever, having a handle at one end and carrying the rib. This lever is guided by the upright frame, and when not in use is drawn up by the weight. The crucible material is placed in the plaster mold and partially spread by hand or by a conical muller. The back end of the lever is then brought beneath the stop or fulcrum and pressed down until the lever takes a stop. The rib on the lever smooths, compresses, hardens, and polishes the interior of the

mold, forming a perfect crucible possessing great strength and beauty. At the same time, there is great uniformity in the crucibles made in this manner. The crucible and mold are to be lifted off the chuck, and another mold introduced in the chuck, and the operation repeated."

"The crucible and mold are set aside. When the plaster of the mold has absorbed the moisture from the crucible and the crucible has contracted away from the mold

and become sufficiently dry to be exposed to the air without risk of cracking, the crucible is to be removed and dried in any usual manner, and may be baked or burned."

The claims are as follows:

"What I claim and desire to secure by letters patent is:"

"1. Manufacturing crucibles in a plaster mold, in the manner and for the purposes specified."

"2. Lever *l* and rib *n*, applied in the manner specified to form the interior of a crucible contained within a revolving mold, as set forth."

"3. The combination of the revolving chuck *c*, plaster mold *d*, lever *l*, and rib *n*, as and for the purposes specified."

"4. Mounting the lever *l* and rib *n* in the frame *g* in the manner specified, in combination with the counterpoise *k*, fulcrum *o*, and stop *p*, for determining the size of the interior of the crucible, as specified."

It is conceded by counsel for the appellants that the claims in this patent were invalid as being too broad, and that it was for this reason, and for a more definite and limited description of the real invention intended to be claimed, that it was surrendered and reissued.

The state of the art at the date of his original patent is described by Nimmo in the reissue, as follows:

"Long prior to said Nimmo's invention, the mode of manufacturing certain articles of pottery by means of a rib or former to give the desired shape to the inside of the article, and a revolving plaster vessel to properly present the 'ball' (as the lump of tempered clay is called) to and support it under the action of the rib was well known, but this mode of manufacture was not applicable in the manufacture of crucibles, because the crucible would be injured or destroyed in removing the rib by

the end of the rib striking the upper part of the crucible, as will be plain to all skilled in the art of crucible making and acquainted with the mode of manufacture above referred to."

"Another mode of manufacturing certain articles of pottery ware by means of a rib or former for the inside of the article, and a revolving table (a common potter's wheel) which partially presented the ball to and supported it under the action of the rib, the workman using his hands to aid in presenting the ball to and supporting it under the action of the rib, is described in a French work published in 1857, entitled 'Lecons de Ceramique,' par M. A. Salvetat, volume second, pages 121-122. This last named mode of manufacture was applicable to the manufacture of crucibles, the apparatus being such that the rib was guided so as to cause it to approach the axis of the pot, where it was necessary that it should do so in order to prevent injury to the pot; but even if useful at all in that manufacture, it is without doubt very much inferior to the mode of manufacture invented by Nimmo and hereinafter described, the distinguishing difference between them being that the ball is presented to the rib and supported under its action not by a flat revolving metal disk, but by a vessel made of plaster, which takes the place of both the flat revolving disk and the workman's hands, performing all the functions performed by this disk and the hands of the workman, but in a much more perfect manner and in less time."

"The invention of said Nimmo is in fact an improvement on the mode of manufacture, as well as on the apparatus, described in Salvetat's work, the improvement consisting in the different mode of presenting and supporting the ball; but we do not wish to be understood as claiming this mode of presenting and supporting the ball as the invention of said Nimmo, as his improved mode of manufacture is new solely because it is, as a whole, substantially different from the mode described by Salvetat and from the mode first above referred to; indeed, as a short general description of Nimmo's improved mode, it may be said to be substantially the same as that described by Salvetat, so far as shaping the inside of the crucible is concerned, and substantially the same as the mode first above

referred to, so far as presenting the ball to and supporting it under the action of the rib is concerned. By Nimmo's improved mode of manufacture much labor and expense are saved, and, what is still more important, crucibles are produced which are superior to those made by any practical mode known prior to said Nimmo's invention in many very important respects. "

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The drawings are the same in both the original and reissued patent, but in the description of the machine with reference to the drawing contained in the reissue, prominence is given to the mode of operating the rib, after the crucible is formed, by which it can be withdrawn without striking and injuring the crucible, as to which no allusion was made in the original patent. It is admitted, however, that this mechanism is substantially the same as that described by Salvetat in the publication referred to.

The reissue expressly disclaims as the invention of Nimmo both the modes and both the apparatus above mentioned -- that is, the use of a rib or former to give the desired shape to the inside of the article, and the revolving plaster vessel or mold, and the mode and apparatus described by Salvetat -- that is, the use of a rib or former, the apparatus being such that the rib is guided so as to cause it to approach the axis of the crucible when it was necessary that it should do so in order to prevent injury to it.

The importance of this feature in any apparatus of the kind becomes manifest from the fact that crucibles of the character of those intended to be made by this process usually have what is termed "a bilge" -- that is, are smaller in circumference at the mouth or top than at some other point, so that if the rib or former were lifted out perpendicularly from the position it occupies while in operation, it would necessarily strike against the interior surface of the crucible as it rose. To avoid this, it has to be withdrawn from the position it occupies while in the act of forming the internal surface of the crucible to one nearer to the axis of rotation, so that, being lifted, it may pass upward through the mouth of the crucible without striking against the sides. And considering how characteristic is this

feature of the apparatus and how essential it is to its profitable use, it is worthy of note that Nimmo, in his original patent, does not allude to it, although his claim for managing his rib includes it, and equally so that it does not seem to have suggested to him at that time its utility in connection with the manufacture of crucibles with a bilge, for his description does not distinguish between those which have and those which have not a bilge, and his drawing is that of a mold with a

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flaring mouth, for the making of which such a motion of the former, in withdrawing it, is not necessary. In addition the mold itself, made of plaster, for vessels having a bilge, is required to be in two parts in order that it may be removed from the crucible after the operation is complete -- an adaptation which does not appear either in Nimmo's specifications or drawing.

Nimmo's actual claim, as made in the reissue, is as follows:

"The improved apparatus above described, having the specific character, objects, and functions above explained, and consisting of the rib, the revolving mold, and the mechanism by which the rib is guided toward the axis of revolution of the mold as it is withdrawn, as set forth, these elements being claimed only in combination each with all the others, and no claim is made to any combination of any of them less than the whole."

It is admitted in argument by counsel for the appellants that the mold is old and the rib is old, but it is claimed that prior to Nimmo's invention, the mechanism for combining the rib and mold into one machine was such that the rib could not be moved bodily towards the axis of the mold or away from that axis.

Besides a denial of the alleged infringement, the appellees maintained several defenses. They claimed that the reissued patent is void because the claim is too broad; because there is no coactive combination between the elements of the claim; because the state of the art, as set forth in the specification, shows that there is no novelty in the alleged combination; because the reissue is for a different invention from that described in the original patent; and because the

alleged invention of Nimmo had been fully anticipated. The anticipations set out in the answer and relied on were:

1. By the Salvetat publication.

2. By the Wise patent, being a patent granted to Jacob Wise and Freeman Wise, dated Nov. 30, 1852, No. 9437, for an "improvement in the manufacture of stone and earthen ware."

3. By the Smith patent, being a patent granted to William

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Smith, dated Nov. 3, 1863, No. 40,506, for apparatus for making plumbago crucibles.

4. By prior knowledge and use of the alleged invention at Kier's works in Pttsburgh.

The decree below dismissed the bill, to reverse which this appeal is prosecuted.

The account given in the specification of the reissued patent of the state of the art at the date of the alleged invention, and the reference to Salvetat's publication describing the method and apparatus referred to and a comparison of that with the claims and disclaimers of the appellants, require a more particular examination of Salvetat's description of the device and its mode of operation, as contained in his publication. It will be observed that the reissue represents Salvetat as having fully described the rib or former, and the mechanism which guides it so that it can be withdrawn from the crucible, when completed, without injury, even when it has a bilge, but as omitting in connection with it any use of a mold. The statement of the reissue is that while Salvetat described the use of the rib for forming the interior of the vessel, its external form was molded by the unassisted hand of the workman, manipulating the ball while revolving on the flat disc of the common potter's wheel. And the alleged invention of Nimmo consists merely in adding a mold to the apparatus described by Salvetat to form the combination which he claims as his invention.

An examination of the extract from Salvetat's publication, descriptive of this apparatus and method, which is contained in the record makes it doubtful whether the account of it given in the specification of the reissued patent is not a misconception. The drawings illustrating it, it is true, do not show a mold, and the text in referring to them says the vessel is supported by the wheel. But this perhaps is explained by the statement that it is intended to show merely how Messrs. Bourgon and Chalot, the originators of it, have arranged the rib in a very ingenious manner for hollowing out hollow ware with the rib itself. The whole article or chapter is entitled, "Hollow ware pressing in plaster molds," and its very purpose seems to be to explain the use and utility of molds in shaping

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the forms of pottery by pressing, and all the other processes and devices mentioned certainly refer to molds as used. If the rule " *noscitur a sociis* " applies, there would be little room to doubt that the one in question also contemplated their use, and it seems difficult to understand how the vessel can be shaped externally unless the mold is implied.

But we assume for the purposes of this case that the account, as contained in the reissued patent, of this method and apparatus is correct, and that Salvetat does not describe the use of a mold in combination with the rib. There is, however, no doubt whatever that Salvetat describes the operation of a rib, by means of a mechanism which directs it in the formation of the interior of a vessel, while in motion on a revolving wheel, and guides it when the vessel is formed, even when it has a bilge, so that by bringing it into a proper relation with the axis of revolution, it can be withdrawn from the side of the vessel which it has shaped and lifted through its mouth or top without touching and injuring its sides. This is conceded by the appellants and is admitted in the patent itself. It is also confessed that the use of the mold for supporting the ball while the rib or former presses it on the inside and thus shapes its corresponding outside is old, and is not of itself claimed as the invention of Nimmo. The alleged invention, then, consists merely in supplying to the apparatus described by Salvetat a mold for supporting the ball and giving shape externally to the crucible.

We are clearly of opinion that this is not patentable. It comes plainly within the rule, as stated by Mr. Justice Strong in *Hailes v. Van Wormer,* 20 Wall. 353, 87 U. S. 368 , where he said:

"All the devices of which the alleged combination is made are confessedly old. No claim is made for any one of them singly as an independent invention. It must be conceded that a new combination, if it produces new and useful results, is patentable, though all the constituents of the combination were well known and in common use before the combination was made. But the results must be a product of the combination, and not a mere aggregate of several results, each the complete product of one of the combined elements. Combined results are not necessarily a novel result, nor are they an old result

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obtained in a new and improved manner. Merely bringing old devices into juxtaposition, and there allowing each to work out its own effect, without the production of something novel, is not invention."

"The combination, to be patentable," said Mr. Justice Hunt in *Reckendorfer v. Faber,* 92 U. S. 347 , 92 U. S. 357 ,

"must produce a different force or effect, or result, in the combined forces or processes, from that given by their separate parts. There must be a new result produced by their union; if not so, it is only an aggregation of separate elements."

In Nimmo's apparatus, it is perfectly clear that all the elements of the combinations are old and that each operates only in the old way. Beyond the separate and well known results produced by them severally, no one of them contributes to the combined result any new feature; no one of them adds to the combination anything more than its separate independent effect; no one of them gives any additional efficiency to the others or changes in any way the mode or result of its action. In a patentable combination of old elements, all the constituents must so enter into it as that each qualifies every other; to draw an illustration from another branch of the law, they must be joint tenants of the domain of the invention, seised

each of every part, *per my et per tout,* and not mere tenants in common, with separate interests and estates. It must form either a new machine of a distinct character and function or produce a result due to the joint and cooperating action of all the elements, and which is not the mere adding together of separate contributions. Otherwise it is only a mechanical juxtaposition, and not a vital union.

In the case of this apparatus, the mold was known, and a rib or former was known, and their use in combination was known. Salvetat described a rib so arranged that after it had performed it function in shaping the interior of the vessel, it could be withdrawn through the top of the vessel so as not to produce injury by striking against its side. This rib Nimmo substituted for the old one in the same combination. And this is the whole of the invention. Upon the principle stated, there is no invention in it.

We are also of opinion that the invention claimed for

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Nimmo, as described in the reissued patent, is covered by the prior patents to Wise and to Smith.

Undoubtedly they both embody the principle of a former used in combination with a mold for the purpose of manufacturing crucibles, connected so that the former can be withdrawn in the case of vessels having a bilge, without injury.

It is objected, however, that the machines described in these patents are mere paper machines, not capable of successful practical working. But on examination it sufficiently appears, we think, that the objections can be sustained only as to minor matters of detail in construction not affecting the substance of the invention claimed, and could be removed by mere mechanical skill, without the exercise of the faculty of invention. In this view, the Wise and Smith patents are not rendered inefficient as defenses in this suit by reason of the alleged imperfections of the machines described in them.

The bill of the appellants was dismissed by the court below on the ground of the prior knowledge and use of the alleged invention at Kier's works in Pittsburgh. We are of opinion that the testimony sustains that finding.

Decree affirmed.