

ASMUS *v.* ALDEN.
SAME *v.* FREEMAN.

Circuit Court, E. D. Pennsylvania. May 13, 1886.

1. PATENTS FOR INVENTIONS—REISSUE—NEW CLAIM—VALIDITY.

Where matter claimed in the reissue was embraced in the original patent, but not claimed therein, held not an enlargement of the invention, and may be secured by reissue.¹

2. SAME—LACHES—LIMIT FOR REISSUE.

Two years seem to have become the measure of reasonableness or limit of time within which, ordinarily, the application must be made.

3. SAME—JURISDICTION OF COMMISSIONER OF PATENTS.

Whether the omission occurred through “inadvertence, accident, or mistake” is (in proper cases for amendment) a question for the commissioner.

4. SAME—NEW CLAIMS.

Miller v. Brass Co., 104 U. S. 850, does not prohibit the introduction of new claims, under all circumstances. It simply applies the equitable doctrine of estoppel to a patentee who, after inexcusable delay, (during which others may be presumed to have acted on the reasonable inference that all not claimed in the patent has been dedicated to the public,) sought, by means of a reissue, to enlarge the scope of his patent, so as to embrace and prohibit such acts.

5. SAME.

The Combined Patents Can Go. v. Lloyd, 11 Fed. Rep. 149, cited and approved.

6. SAME—INFRINGEMENT.

Differences in size, form, and degree not material.

7. SAME—FORMER ADJUDICATION, EFFECT OF.

Former decree by circuit judge is not final between others; but, involving apparently same questions, is entitled to little, if any, less weight on that account; and in case of difference of opinion between district and circuit judges, the former would not act without rehearing by latter.

8. SAME—REISSUE CONSTRUED, AND HELD VALID.

Reissue No. 3,204, dated November 24, 1868, given on original letters patent No. 70,447, granted November 5, 1867, to George Asmus, assignee of F. W. Lurmann, for blast-furnaces, considered valid.

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9. SAME-INVENTION—WHAT CONSTITUTES.

What constitutes invention in the legal sense is difficult of exact definition in terms. Where, however, an old device or machine in general use, with acknowledged serious defects, which have been long endured because no one has previously discovered a means of obviating them, is taken in hand, and, by changing its form of structure, they are removed, and a different and greatly improved result obtained, it may safely be affirmed that the change required invention. Where the improvement, and consequent public benefit, is great, very little evidence of invention is required.

In Equity.

Bakewell & Kerr, for complainant.

Wm. D. Baldwin and Wayne MacVeagh, for respondents.

BUTLER, J. These cases involve the same matter, and have been heard together. The suits are for infringement of letters patent No. 70,447, dated November 5, 1867, reissued November 24, 1868, (No. 3,204,) to George Asmus, assignee of F. W. Lurmann. The infringement charged originally was of the first and several of the subsequent claims. At a later stage in the litigation the charge was limited to the first and sixth. On the argument it was further limited to the first. The answer denies the validity of the patent, and the alleged infringement.

First. Is the patent (as respects this claim) valid? Second. Has it been infringed?

Its validity is attacked on several grounds: (1) That the matter covered is not original with the patentee; (2) that it does not involve or show invention; (3) that it was not embraced in the patent* as originally issued.

These objections will be considered in their order.

1. Is the matter claimed original? The state of the art prior to the patent, shows that blast-furnaces (the cylinders of which are not involved, and need not be described) were constructed with a "fore-hearth," sometimes called a "t ymp," being an outward projection at one side, (commencing a few feet above, and continuing to the foundation,) into which, from the hearth proper, (situated immediately behind, at the bottom of the cylinder,) there was an opening, which allowed the molten iron and cinder to flow out. This projection was covered by a movable horizontal metallic "weight-plate." The molten iron and cinder were thus drawn off from the bottom or hearth of the furnace into the "forehearth," the cinder being lighter, and floating on top. When the latter rose nearly to the level of the blast-pipes or "tuyeres," it was removed, through an opening just above the level of the fused iron. The act of removing it was called "tapping the cinder," and its performance was necessary several times in the intervals between drawing off the iron, (through an opening below.) This operation of removing the cinder-known as "working the furnace"—was a laborious and disagreeable performance. Mr. Grittinger describes it as follows:

"The working of the furnace consisted in the removal of effete or dead matter that accumulates in the forehearth, by forcing the same upward with 686 a slight blast pressure, and then shoveling it off. It was necessary at times to loosen the material by means of wringers and crust-bars, which were inserted in the forehearth. It frequently happened that the slag and effete matter chilled, and could be removed only with difficulty. In such cases we were compelled to abandon the working of the furnace in the manner above described, and remove the slag through the opening marked Cinder-notch' on sketch No. 2, until the forehearth, by the operation of the furnace, became

hot enough to undermine the crust, melt the effete matter, and make the crust removable. We frequently ran for weeks with the forehearth in this chilled condition.”

Other serious difficulties were experienced in the use of the forehearth, among which was the chilling, occasionally, of the hearth, forming what is known as “salamander,” stopping the operation of smelting, and requiring the removal of some part of the walls of the furnace before the operation could be resumed. In this state of the art it occurred to Lurmann that these serious disadvantages might be avoided by dispensing entirely with the forehearth, (continuing the wall of the furnace perpendicularly down to the foundation, thus closing the breast,) and drawing off the cinder or slag by means of an aperture leading directly to the hearth, the aperture, to be water-cooled, so as to protect its walls; and that by employing a device called a “cinder-notch,” which may be fitted into the aperture, the flow of molten cinder might be regulated. This conception, after being tested by experiment, was carried into practical operation, and the patent in suit obtained.

While the claims are seven in number, the distinct elements or parts of the invention seem to be three: (a) The closed breast. (b) The water-cooled slag discharge, leading directly from the hearth. (c) The device for regulating the flow of molten slag. The principal in importance would seem to be the first, which is made an element of the claim now involved. It might well have been made the entire subject of the claim. The patentee, however, has associated with it the water-cooled slag discharge, and thus qualified and limited his right. That the matter covered by the claim was original with Lurmann is reasonably clear. Certainly there is no such evidence of anticipation as serves to repel the contrary presumption arising from the patent. The defendants’ evidence seems, virtually, to

ignore that part of the claim which relates to the closed breast, attacking simply the water-cooled slag discharge, as separately claimed elsewhere. If this attack were sustained, it would be immaterial to the result. The combination of the slag discharge, even if old, with the hearth of the closed breast furnace, would form a valid claim. While, therefore, it is unnecessary to discuss the novelty of the slag discharge, described as an element in this claim, it is proper to say that I am not satisfied it is old. The record, in my judgment, fails to disclose anything calculated to cast doubt on the novelty of the combination described in the claim, or of the first element in this combination, (the closed breast furnace.) Some reference was made on 687 the argument to a cupola furnace,—a different structure, intended for a different purpose; but the record contains no description even of this. How it resembles (if at all) the blast-furnace here involved, and why, therefore, it should be regarded as anticipatory, the court is not informed.

2. Did the patentee's improvement of the old furnace require invention? This question, I think, is free from doubt. What constitutes invention, in the legal sense, is difficult of exact definition, in terms. Where, however, an old device or machine in general use, with acknowledged serious defects, which have been long endured because no one has previously discovered a means of obviating them, is taken in hand, and, by changing its form or structure, they are removed, and a different and improved result obtained, it may safely be affirmed that the change required invention. Where the improvement, and consequent public benefit, is great, very little evidence of invention is required. *Smith v. Goodyear Co.*, 93 U. S. 486; *Washburn & M. Manuf'g Co. v. Haish*, 4 Fed. Rep. 907; *Eppinger v. Richey*, 14 Blatchf. 307; *Isaac v. Abrams*, 14 O. G. 862. The advantages arising

from the plaintiff's improved furnace are very great, as the record shows,—among them, that it admits of a higher pressure of air, diminishes the labor attending the operation of smelting, increases the product while diminishing the cost, and lessening (if not avoiding) the danger of chilling. Indeed, so great are the advantages that it has virtually driven the old form of furnace out of use, where the business of smelting is largely carried on.

3. Was the matter covered by the claim embraced in the original patent? The claim itself certainly was not. The matter claimed, however, as certainly was. The specifications originally filed say, among other things:

“This invention relates to furnaces for smelting iron ore, and has for its object to dispense with the tymp or forehearth [‘tymp’, we see, is used synonymously with ‘forehearth’] and the wall stone, now in common use in iron blast-furnaces, and to replace the tymp arrangement by such a construction as allows the slag to be tapped directly from the hearth. * * * My furnace has no tymp, [that is, no forehearth,] and the sides of the hearth, whether round or square, extend clear round to the bottom stone, the usual opening being made in the lower part of the hearth for the discharge of the iron.”

This language is as clear a description of the closed breast furnace as could well be written. Calling it a closed breast furnace would not be clearer. A furnace built in accordance with this language would necessarily be closed breasted.

The other element of the claim,—“where the slag is discharged through an opening or openings cooled by water,” is no less clearly described.

The drawings originally filed show the same. The claim might, therefore, have been embraced in the patent as first issued, or introduced into the reissue without changing the specifications. The change subsequently made simply expresses the same thing

in different 688 terms. The claim is not, therefore, an enlargement of the invention as shown by the patent-office or the patent. That such additional claims, omitted through "inadvertence, accident, or mistake," may be secured by means of a reissue, if applied for within reasonable time, is not open to question. Two years seems to have become the measure of reasonableness, or limit of time, within which, ordinarily, the application must be made. Here it was made a little after the expiration of one year. Whether the omission occurred through "inadvertence, accident, or mistake" is (in cases proper for amendment) a question for the commissioner. The learned counsel for defendants think *Miller v. Brass Co.*, 104 U. S. 350, worked a change in this respect, prohibiting the introduction of new claims under all circumstances. This is a mistake. Such a result could only follow a repeal or disregard of the statute governing this subject. *Miller v. Brass Co.* simply applied the equitable doctrine of estoppel to a patentee who, after inexcusable delay, (during which others may be presumed to have acted on the reasonable inference that all not claimed in the patent has been dedicated to the public) sought, by means of a reissue, to enlarge the scope of his patent so as to embrace and prohibit such acts. My understanding of this case, and its bearing on this subject, was fully expressed in *Combined, Patents Can Co. v. Lloyd*, 11 Fed. Rep. 149. Subsequent cases have contained nothing different.

Second. Has the claim been infringed? This question also must be decided against the defendants. Their furnaces are built with closed breasts, distinguishable in no material respect from the plaintiff's, and have water-cooled slag discharges leading directly from the hearth. It is no answer to say that these slag discharges are not water-cooled to the same extent as plaintiff's; nor that the defendants do

not use the cinder-notch, which is made the subject of plaintiff's seventh claim, and designed to regulate more completely the discharge of molten cinder. As we have seen, the plaintiff's patent contemplates the use of the slag discharge without, as well as with, this notch. If it were true that the slag discharge embraced in the first claim contemplated the constant employment of the cinder-notch, the only difference between the defendants' discharge and the plaintiff's, thus constructed, would seem to be in the size and form of the opening, and the degree of water-cooling; which would not be material.

Thus far we have not alluded to the suit brought in the Western district of this state, founded on this patent, against the Dunbar Furnace Company and others, in 1877, which appears to have involved the questions now presented, and in which a decree was entered for the plaintiff. While the decree was not final, it was, under the circumstances, entitled to little, if any, less weight on that account. No opinion was filed, and the defendants here insisted upon being heard as if the questions had not previously been considered. The plaintiff seeming in some measure to acquiesce in this, I have so heard them. 689 Had I reached a different conclusion, however, I would not have acted upon it without a rehearing before the circuit judge who entered the decree referred to.

A decree will be entered for the plaintiff in pursuance of this opinion.

NOTE.

Reissues.

When original and reissue for different inventions, latter void. *Heald v. Rice*, 104 U. S. 737; *Gosling v. Roberts*, 1 Sup. Ct. Rep. 26.

Identity of original and reissue question of law for court. *Heald v. Rice*, 104 U. S. 737.

Where original claims combination, and reissue claims combination of smaller number of elements,

reissue void. *Mathews v. Machine Co.*, 105 U. S. 54; *Bantz v. Frantz*, Id. 160; *Johnson v. Railroad Co.*, Id. 539; *Gage v. Herring*, 2 Sup. Ct Rep. 819; *Clements v. Odorless Co.*, 3 Sup. Ct. Rep. 525.

Reissue claims broader than original claims, void. *Moffitt v. Rogers*, 1 Sup. Ct. Rep. 70; *McMurray v. Mallory*, 4 Sup. Ct. Rep. 375; *Turner & Seymour Co. v. Dover Co.*, 4 Sup. Ct. Rep. 401; *Malin v. Harwood*, 5 Sup. Ct. Rep. 174; *Torrent & Arms Co. v. Rodgers*, 5 Sup. Ct. Rep. 501; *Wollensak v. Reiher*, 5 Sup. Ct. Rep. 1137; *Miller v. Foree*, 6 Sup. Ct. Rep. 204; *Brown v. Davis*, 6 Sup. Ct. Rep. 379; *Yale Lock Co. v. Sargent*, 6 Sup. Ct. Rep. 935.

¹ See note at end of case.

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