

**Bantz Vs. Frantz**

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**Court :** US Supreme Court

**Decided On :** 1881

**Appeal No. :** 105 U.S. 160

**Appellant :** Bantz

**Respondent :** Frantz

**Judgement :**

Bantz v. Frantz - 105 U.S. 160 (1881)

U.S. Supreme Court Bantz v. Frantz, 105 U.S. 160 (1881)

**Bantz v. Frantz**

**105 U.S. 160**

*APPEAL FROM THE CIRCUIT COURT OF THE UNITED*

*STATES FOR THE DISTRICT OF KENTUCKY*

## **SYLLABUS**

1. Reissued letters patent No. 4731, granted Feb. 6, 1872, to Gideon Bantz for an improvement in boiler furnaces for burning wet fuel, are void inasmuch as the specification and claim attached to the original letters No. 26,616, which bear date

June 22, 1858, were confined to a combination therein described, whilst the reissued letters cover the several elements of that combination as distinct inventions.

2. If the first specification was defective in not asserting a separate claim for each device, the right of the patentee to make the requisite correction was forfeited by his delay and laches. *Miller v. Brass Company*, [104 U. S. 350](#) , cited upon this point and reaffirmed.

On June 22, 1858, there was issued to Gideon Bantz, the appellant, who was complainant in the court below, an original patent of that date "for an improvement in furnaces for heating steam boilers." On Feb. 6, 1872, Bantz obtained a reissue, and on June 22, 1872, an extension for seven years of his reissued patent.

The bill in this case was filed by him on May 4, 1876, to restrain infringement by the defendant, David Frantz, of the extended reissue.

The answer denied the novelty and utility of the invention, denied infringement, and asserted the invalidity of the reissue.

The Circuit Court dismissed the bill, and the case is brought here by the complainant.

The specification of the original patent declared:

"The object of this invention is the more perfect combustion of tan, sawdust, bagasse, and all other kinds of refuse fuel in a wet or dry state, as well as of wood or coal. It is, however, with particular advantage to the burning of wet fuels. My invention consists in the arrangement embracing, for united use in the manner and for the purposes hereinafter specified, the following features, to-wit:"

"First, two or more arched fire chambers, with throats of less area than their capacity; second, an auxiliary combustion reservoir or chamber, with *cima-reversa* shaped bottom and side draft door; third, a series of reverberatory chambers, with side draft doors and

passages at top for communication with each other; and, fourth, a diving or direct flue leading into the chimney or smokestack."

"To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation."

"A A are two arched fire chambers, arranged side by side furnished with grates *a a*, having ash pit B B provided below the said grates. These fire chambers are not placed below the boiler H, but directly in front thereof, and longitudinally therewith. They may, however, be placed at one side of the boiler or at any angle to it. Each is provided with the usual door *b*, but these are only used for lighting the fires, and the ash pits are provided with doors *c* to regulate the supply of air through the grates, and permit the cleaning out of ashes. On the top of each chamber there are feeders *d d* for supplying the fuel, but as these feeders are the same as used in other furnaces, no particular description of them is necessary. The fire chambers are covered with a flat floor built over the arches, that the fuel may be wheeled to the feeders in barrows, or brought in any other convenient manner. At the rear end of each fire chamber there is a throat-like aperture *e* communicating with what I term the reservoir C, which is built of brick, lined with firebrick, under the front portion of the boiler, and which has a concave bottom in and convex back *n*, which are formed by a *cima-reversa* shaped plate. By having the bottom and back of the reservoir formed by a *cima-reversa* shaped plate, the throat *e* is not partially closed up, as it would be if the plate was straight and set inclined, and, beside this, the heated products of combustion are made to hug the bottom of the boiler, and as the draft is at this point, the perfect combustion of partially ignited gases is insured. The convex back of the reservoir terminates in and serves as a bridge wall, and has a concave top so formed as to leave a space, *o*, of but three or four inches between it and the boiler."

"The purpose of the reservoir will be presently explained. In rear of the bridge wall *f* there is a series of reverberatory chambers D D D, two, three, or more, one behind the other, the series extending nearly as far as the rear end of the boiler,

and the said chambers being severally separated by bridge walls *g g* , and each chamber being provided with one or more doors *h* in either or both sides, for the purpose of admitting air in sufficient quantities either to complete the combustion of the gases from the fire chambers or to check the draft. The reservoir is furnished with a door *h1* for a similar purpose as those *h h* in the reverberatory chamber. At the rear of the hindmost reverberatory chamber there is a wall *g1* , like

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*g g* , behind which there is a diving or drop flue E leading to the chimney."

"The operation of the furnace is as follows: the gaseous products of the combustion in the fire chamber A A escape by the throats *e e* into the reservoir C, where they mingle together, and the combustible portion thereof becomes ignited, and where their heat acts upon the boiler, and from whence they pass into one after another of the reverberatory chambers, in each of which a portion of their heat is abstracted by contact with a portion of the boiler, and finally they descend the flue E to the chimney. The effect of the principal portion of my improvement, which consists in the employment of the reservoir C, connected with the fire chambers by the throats *e e* , of much smaller transverse area than the fire chamber, is that the products of combustion and heat are prevented leaving the fire chamber too rapidly, and the said chambers are consequently caused to be heated to an intense degree, and a very nearly perfect combustion of the fuel is obtained therein, and when the gaseous products of combustion leave the fire chambers by the said throats and arrive in the reservoir C, the side walls and curved bottom and back of which are kept at a white heat, the still combustible portion of the gaseous products is ignited under the boiler."

The claim was thus stated:

"What I claim as my invention, and desire to secure by letters patent, is: the arrangement of fire chambers A A, contracted throats *e e* , auxiliary combustion reservoir C, with the *cima-reversa* bridge plate in *n* , and the door *h1* ,

reverberatory chambers D D, with doors *h h*, and the diving or direct flue E, substantially as and for the purposes set forth."

The description of the invention in the specification of the reissued patent is substantially the same as that in the specification of the original patent. The drawings are identical. In the reissue the invention is called "a new and useful improvement in furnaces for burning wet fuel." The claim is thus set forth:

"I do not claim a furnace for burning wet fuel, broadly, nor the use of a series of fire chambers connecting with the common flue, arranged between the furnace and the boiler, as I am well aware that this had been done before. "

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"Having described my invention, I claim:"

"1. In a furnace for burning wet fuels, having two or more single fire chambers not arranged under the boiler, the combustion chamber or reservoir C, arranged above the top of said fire chambers, and located directly under the front end of the boiler, essentially as described."

"2. The *cima-reversa* bottom in *n* of the combustion chamber or reservoir C, in combination with the narrow throats *e* of the separate fire chambers, and the narrow exit flue *o* of the bridge walls *f*, for the purpose essentially as described."

"In combination with the combustion chamber or reservoir C, arranged and located as described, I claim the side door or doors *h1* for the admission of atmospheric air, for the purpose described."

"4. In combination with a series of fire chambers A and the combustion chamber or reservoir C, located and arranged directly beneath the front end of the boiler, and above the Crown of said fire chamber, I claim a series of reverberatory chambers D, provided with side doors *h* and a diving flue E at the rear end of the boiler, to hold the heat beneath the same throughout its entire length, and to arrest and deaden the sparks as described."

"5. In a furnace for burning wet fuels in which the fire chambers are not arranged under the boiler, I claim the arrangement of the boiler upon the rear wall of the furnace and the rear wall of the diving flue E for the purpose of obtaining the full advantage of the heat of the walls of the furnace, and of the diving flue, as described."

"6. In a furnace for burning wet fuels, having a flat top, and supplied through openings therein, I claim the dead chambers, arranged between the floor and the arches of the fire chambers, for the purpose of maintaining the top of the furnace cool for the workingmen as described."

MR. JUSTICE WOODS, after stating the case, delivered the opinion of the court.

We are clearly of opinion that the reissued patent is void.

It is evident on a cursory reading of the specification and

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claim of the original patent that it was meant to cover a combination of the several contrivances therein described, and not to cover the several elements of the combination as distinct inventions. No claim is made for the several parts of which the furnace is constructed, but for the "arrangement embracing, for united use in the manner and for the purposes specified, the following features," &c.;

If the claim had been for the several distinct contrivances of which the furnace is composed, as claimed in the reissue, the original patent would not have been granted, because the evidence in the record shows that at least the sixth claim in the reissued patent, for dead chambers over the arches of the fire chambers, was distinctly covered by the patent of Moses Thompson, dated April 10, 1855, for an improvement in

image:a

burning

tan bark, bagasse, sawdust, or other kinds of fuel in a wet state, for the purpose of creating heat to generate steam &c.; This the drawings accompanying the specification of Thompson's patent clearly show.

It is evident, therefore, that if the appellant had, in his application for the original patent, claimed as his own invention all the distinct devices described in the specification, he could not have obtained his patent in its present form. It could have been only on the ground that his claim was for a combination that it was allowed and the patent issued. *Prouty v. Draper*, 1 Story 568; *Pitts v. Whitman*, 2 Story 609; [\*Prouty v. Ruggles\*](#), 16 Pet. 336.

If the reissued patent is valid the appellant could maintain an action against the infringer of anyone of the separate claims covered by it. Under the original patent, suit could be maintained only against those who employed the combination embracing all the distinct contrivances described in the reissued patent. The reissue is therefore broader than the original patent, and is, under the circumstances of this case, void.

The Act of July 8, 1870, c. 230, 16 Stat. 198, was in force when the reissue was granted. Section 53, Rev.Stat., sec. 4916, declares

"that whenever any patent is inoperative or invalid by reason of a defective or insufficient specification, or by reason of the patentee claiming as his own invention or discovery more than he had a right to claim as new, if the error has arisen by inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, the commissioner shall, on the surrender of such patent and the payment of the duty required by law, cause a new patent for the same invention, and in accordance with the corrected specification, to be issued to the patentee."

In this case, the original patent bears date June 22, 1858. The reissue bears date Feb. 6, 1872, more than thirteen years and six months after the date, and less than five months before the expiration, of the original patent. If the specification in

the original patent was defective or insufficient in claiming a combination of several devices instead of making a distinct claim for every device which entered into the combination, the fact was instantly discernible, even to an unpracticed eye, as

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soon as the patent was read. Therefore, as said by MR. JUSTICE BRADLEY in delivering the opinion of this Court in a similar case, *Miller v. Brass Company*, [104 U. S. 350](#) , if any correction was desired it should have been applied for immediately; the right to have the correction made was abandoned and lost by unreasonable delay. That case is apposite and is conclusive of this.

*Decree affirmed.*

MR. JUSTICE HARLAN did not sit in this case, nor take any part in deciding it.

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