

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GEORGE L. FISH

Appeal No. 95-4615
Application No. 08/158,853¹

HEARD: July 13, 1999

Before PAK, OWENS, and KRATZ, Administrative Patent Judges.

PAK, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. 134 from the examiner's final rejection of claims 1 through 24, which are all of the claims pending in this application.

¹ Application for patent filed November 29, 1993. According to appellants, the application is a continuation-in-part of Application No. 07/814,689, filed December 30, 1991, now abandoned.

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The subject matter on appeal is directed to a roof or lid for melting furnaces, which generally has a diameter of twenty six feet. See specification, page 1. Claims 1, 13 and 20 are representative of the subject matter on appeal and read as follows:

1. A furnace lid, comprising:

a center panel;

side panels surrounding the center panel, each side panel having an outer edge, an inner edge abutting the center panel and lateral edges each extending between their outer edge and their inner edge, and abutting a lateral edge of an adjacent side panel, said side panels being inclined upwardly from their outer edges toward their inner edges, forming with the center panel a lid having substantially a dome shape, the lateral edges and inner edges being formed with keyways accessible from a surface of the lid; and

keys located in the keyways, wherein the center panel, keys and side panels are formed of castable refractory.

13. A segment of a furnace lid comprising:

a substantially planar panel of precast refractory having an upper surface, a lower surface, lateral edges and an inner edge, wherein the lower surface has a portion inclined relative to the upper surface:

a concave channel extending along each lateral edge, located below the outer planar surface of the panel; and

a relatively thin passage or recess formed along the lateral edges between an outer surface of the panel and the channel, connecting the channel and said outer surface of the panel.

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20. A furnace lid, comprising:

a center panel block; and

side panels surrounding the center panel block, each side panel including a skewback and a plurality of blocks extending from the skewback to said center panel block, said center panel block and skewbacks having a step portion and said plurality of blocks having spaced apart step portions, wherein in assembly, the step portions mutually engage, so that the center panel block and side panels form a substantially arch shape.

As evidence of obviousness, the examiner relies on the following references:

Hawke 1925	1,524,033	Jan. 27,
Beckman et al. (Beckman) 25. 1969	3,434,263	Mar.

Claims 1 through 24 stand rejected under 35 U.S.C. § 103 as unpatentable over the combined teachings of Hawke and Beckman.

We have carefully reviewed the entire record, including all of the arguments advanced by the examiner and appellant in support of their respective positions. This review leads us to conclude that the examiner's § 103 rejection is not well founded. We will not sustain the examiner's § 103 rejection for essentially those reasons set forth in the Brief. We add the following primarily for emphasis.

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With respect to claim 1 through 19, the examiner states that the Hawke reference discloses "all aspect of the [claimed features] except [sic, for] the instantly recited... keyways [and keys]..." According to page 7 of the specification, the terms "keyways" and "keys" recited in claims 1 and 7 are defined as follows:

As Figure 4 shows, the lower edges of the panels are formed with beveled surfaces 50 to facilitate installation. When adjacent side panels are placed in position, the complementary channels 46 and passages 48 become aligned and form a keyway 44 accessible from the upper surface of the panels. Castable refractory, preferably KRICON 30 XR or KRIFORM 30 XR low water vibrating castable, is placed into the passages, flows into the channels, fills the channels and passages, dries, cures and hardens, thereby providing a structural connection among the side panels, referred to hereafter as keys 45.

To remedy the deficiencies of the Hawke reference, the examiner relies on the Beckman reference. Beckman discloses using a shear link (keyways and keys) between "concrete units, such as slabs, panels, etc...", to "add additional shear strength and reduce the shear stress supported by the cement grout in the joint" between adjacent concrete units. See column 1, lines 40-50 together with columns 3 and 4. The

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examiner then appears to conclude that it would have been obvious to use the structure (keyways and key) proposed by the Beckman reference in the furnace roof described by the Hawke reference.

The examiner, however, has not supplied sufficient facts for concluding that one of ordinary skill in the art would look to the structure associated with concrete units to improve the structure associated with refractory furnace roofs. In this regard, we note that the examiner has not established that the furnace roof of the type described in the Hawke reference has the same or similar characteristics, e.g., suffers from the same or similar joining problems, as the concrete units of the type described in the Beckman reference. There is no evidence establishing the need for the shear link structure of the concrete units described in the Beckman reference in the furnace roof of the type described in the Hawke reference. Absent the appellant's own disclosure, we can think of no reason why one of ordinary skill in this art would have been motivated to combine the diverse teachings of the Hawke and Beckman references as the examiner has proposed. As the court in *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d

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1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988) stated, "it is impermissible to use the claims as a frame and the prior art references as a mosaic to piece together a facsimile of the claimed invention."

With respect to claims 20 through 24, the examiner appears to recognize that neither the Hawke reference nor the Beckman reference describes the furnace lid structure recited. We also note that the Hawke and Beckman references, either individually or in combination, do not teach or suggest a furnace lid having a center panel block and a skewback each containing step portions, with a plurality of blocks having spaced apart step portions extending from the skewback to the center panel block to form a substantially arch shape. The examiner, however, alleges that this claimed furnace lid features are no more than an obvious design choice. This allegation is unsupported by any facts. There is no evidence whatsoever that the claimed furnace lid features are an obvious design choice. Nor is there any evidence that the claimed furnace lid features would have been suggested to one of ordinary skill in the art.

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In view of the foregoing, we agree with appellant that the examiner has not established a *prima facie* case of obviousness regarding the claimed subject matter. Accordingly, the decision of the examiner is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

REVERSED

CHUNG K. PAK)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
TERRY J. OWENS)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
PETER F. KRATZ)	
Administrative Patent Judge)	

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APJ KRATZ

APJ OWENS

DECISION: REVERSE
Send Reference(s): Yes No
or Translation (s)
Panel Change: Yes No
Index Sheet-2901 Rejection(s): _____

Prepared: February 24, 2000

Draft Final

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OB/HD GAU

PALM / ACTS 2 / BOOK
DISK (FOIA) / REPORT