

The opinion in support of the decision being entered today
is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THOMAS E. DANDO

Appeal 2007-0086
Application 10/845,785
Technology Center 1700

Decided: July 13, 2007

Before EDWARD C. KIMLIN, BRADLEY R. GARRIS, and
LINDA M. GAUDETTE, *Administrative Patent Judges*.

GARRIS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the final rejection of claims 1-40.¹ We have jurisdiction under 35 U.S.C. § 6.

¹ As correctly pointed out by the Examiner (Answer 2), the Appellant's discussion in the Brief of objections to the Specification and certain claims relates to a petitionable rather than appealable matter. *See Manual of Patenting Examining Procedure* (MPEP) § 1201 (8th ed., Rev. 3, Aug. 2005). Accordingly, this matter will not be addressed in the opinion which follows.

We AFFIRM.

The Appellant claims a process for preparing a foundry shape which comprises: preparing a foundry mix comprising foundry aggregate, an acid-curable resin, and a catalytically effective amount of an acid catalyst and having a work time of 3-10 minutes; shaping the foundry mix into a foundry shape; and partially or totally removing water from the foundry shape to thereby improve the speed of cure of the acid-curable resin. According to Appellant, “[t]he novel aspect of this process is that water is partially or totally removed from the foundry shape after it is shaped in the pattern” (Specification 8). This claimed subject matter is adequately illustrated by independent claim 1 and dependent claim 40 which read as follows:

1. A process for preparing a foundry shape comprising:

A. preparing a foundry mix comprising a major amount of foundry aggregate, an effective binding amount of an acid-curable resin, and a catalytically effective amount of an acid catalyst and having a work time of 3-10 minutes;

B. then shaping the foundry mix into a foundry shape; and

C. then partially or totally removing water from the foundry shape to thereby improve the speed of cure of the acid-curable resin.

40. The process claim 1, 16 or 28 wherein the foundry shape is substantially cured within 15 minutes.

The references set forth below are relied upon by the Examiner as evidence of unpatentability:

Brown	US 3,184,814	May 25, 1965
Lang	US 3,306,864	Feb. 28, 1967
Marsden	US 4,782,102	Nov. 1, 1988
Iyer	US 4,848,442	Jul. 18, 1989

Appeal 2007-0086
Application 10/845,785

Claims 1-40 are rejected under the first paragraph of 35 U.S.C. § 112 for failing to comply with the written description requirement.

Claim 40 is rejected under the second paragraph of 35 U.S.C. § 112 for failing to particularly point out and distinctly claim the subject matter which Appellant regards as his invention.

Claims 1-3, 11-18, 26-30, and 38-40 are rejected under 35 U.S.C. § 102(b) as being anticipated by, or alternatively under 35 U.S.C. § 103(a) as being obvious over, Brown.

The remaining appealed claims are rejected under 35 U.S.C. § 103(a) as being obvious over Brown in view of Marsden or Brown in view of either Iyer or Lang.

OPINION

For the reasons expressed in the Answer and below, we will sustain the § 112, 2d ¶, rejection as well as each of the § 102 and § 103 rejections. However, we will not sustain the § 112, 1st ¶, rejection as fully explained hereinafter.

The § 112, 2d ¶, Rejection

Claim 40 requires the foundry shape to be “substantially cured” within 15 minutes. According to the Examiner, the claim is indefinite because the Specification contains no definition or guidance as to the meaning or scope of the term “substantially” (Answer 4, 8). We agree.

An imprecise term of degree, such as “substantially,” does not automatically render a claim indefinite. *Seattle Box v. Indus. Crating & Packing, Inc.*, 731 F.2d 818, 826, 221 USPQ 568, 573-74 (Fed. Cir. 1981). Whether the claim is indefinite depends upon whether the Specification provides some standard for measuring the degree of the term such that an artisan would understand what is claimed when the claim is read in light of the Specification. *Id.* Therefore, the § 112, 2d ¶, question raised by an imprecise term such as “substantially” is fact-dependent by its nature. *Id.*, 731 F.2d at 829, 221 USPQ at 576.

The Examiner is correct that the phrase “substantially cured,” though recited in the Specification at page 11, line 23, is not accompanied by any definition or guidance as to the meaning of “substantially.” The Appellants state that “[p]ersons skilled in the art would appreciate that to be ‘substantially cured,’ the shape would be capable of being removed from the mold while maintaining its desired shape” (Br. 7). However, no evidence has been proffered in support of this statement.

Moreover, the statement is not compatible with the Specification disclosure. This is because the afore-quoted meaning ascribed to “substantially cured” in the Brief is described in the Specification, at page 1, as relating to foundry shapes after the striptime has elapsed (ll. 25-31). On the other hand, the Specification at page 2 describes foundry shapes as “cured” when they can be used for casting metals (ll. 3-4). Therefore,

Appeal 2007-0086
Application 10/845,785

Appellant's proffered definition of "substantially cured" is inconsistent with the Specification descriptions discussed above.

Under these circumstances, we determine that neither the Specification nor any other aspect of the record before us evinces that one with ordinary skill in this art would reasonably understand what is defined by the claim 40 phrase "substantially cured." We hereby sustain, therefore, the Examiner's § 112, 2d ¶, rejection of claim 40.

The § 112, 1st ¶, Rejection

The Examiner bears the initial burden of establishing a prima facie case of unpatentability for lack of written description, and this burden is discharged by presenting evidence or reasons why persons skilled in the art would not recognize in the inventor's disclosure a description of the invention defined by the claims. *In re Alton*, 76 F.3d 1168, 1175, 37 USPQ2d 1578, 1583 (Fed. Cir. 1996).

In the Examiner's opinion, the appealed claims fail to comply with the written description requirement by virtue of the claim phrase "having a work time of 3-10 minutes" (Claim 1). The Examiner acknowledges that page 1 of the Specification discloses "a desired worktime ranges from 3 to 10 minutes" (ll. 29-30) but indicates that this disclosure relates to the prior art and not the Appellant's invention (Answer 3).

The Appellant argues that the afore-noted Specification, page 1, disclosure of desired work times relates to commercial processes requiring

Appeal 2007-0086
Application 10/845,785

high productivity and that the invention is disclosed as increasing productivity without adversely affecting the work time (Specification 4:1-4) (Br. 7).

We share the Appellant's implicit position that an artisan would recognize in the above-discussed disclosures of the Specification at pages 1 and 4 a description of the here-claimed invention wherein the foundry mix is defined as "having a work time of 3-10 minutes" (Claim 1). This is particularly so because the invention is described as not adversely affecting work time (Specification 4).

It follows that we cannot sustain the Examiner's § 112, 1st ¶, rejection of claims 1-40 as failing to comply with the written description requirement.

The Prior Art Rejections

In contesting these rejections, Appellant separately argues only dependent claim 40 (Br. 2, 10). Therefore, in discussing these rejections, we will focus on independent claim 1, which is the broadest appealed claim, and separately argued dependent claim 40.

The Examiner's § 102 rejection of these (and other) claims is well taken for the reasons fully detailed by the Examiner (Answer 4-5, 8-9). The Appellant argues that "[t]he compositions required by Brown are diluted in water [and] do not contain a catalytically effective amount of acid catalyst prior to shaping the foundry mix [because the catalyst] . . . only becomes

Appeal 2007-0086
Application 10/845,785

effective upon modifying the initial composition by removing water" (Br. 8). This argument is unpersuasive.

As correctly found by the Examiner, Brown's foundry mix contains a catalytically effective amount of an acid catalyst (col. 2, ll. 6-11 and 56-60). We understand the Appellant's point that the acid catalyst is initially diluted with water and not catalytically active until the water is removed (*id.*). However, we find nothing and the Appellant points to nothing in claim 1 which excludes an initially diluted acid catalyst from which water must be removed in order to initiate the catalytic reaction.

To the extent Appellant believes Brown's foundry mix would not have the claim 1 work time of 3-10 minutes (Br. 9), such a belief is without support on this record. As noted by the Examiner (and not disputed by Appellant with any reasonable specificity), "it is inherent that the shaped foundry of Brown exhibit[s] the presently claimed work time given that it undergoes an identical process to the one presently claimed" (Answer 5). This inherency position is also supported by Brown's disclosure of water removal to obtain shaped foundry specimens which have a sufficient green hardness that they can be removed from the mold or pattern without danger of breaking (col. 3, l. 28 - col. 4, l. 17). This is because the aforementioned steps and parameters (e.g., hardness) of Brown correspond to those disclosed (e.g., Specification 1) and claimed by Appellants.

In Brown's above-discussed embodiment, water is removed with a heated air stream to produce green hardness (80-90) sufficient to allow

Appeal 2007-0086
Application 10/845,785

removal of the specimen from the mold whereupon final curing occurs under room temperature conditions (col. 3, l. 28 - col. 4, l. 17). This final curing at room temperature may require as much as 3 hours (col. 4, ll. 9-13) but may require much less time, for example, 10 minutes (Example 1; col. 4, ll. 30-33). Contrary to the Appellant's argument (Br. 10), this last mentioned cure time satisfies claim 40 which recites "the foundry slope [sic, shape] is substantially cured within 15 minutes" (and therefore encompasses a complete cure within 15 minutes). This claim also is satisfied by Brown's alternative embodiment wherein a heated gas stream is passed through the specimen until complete curing is achieved in 5 minutes or less (col. 6, ll. 10-14, ll. 22-37, ll. 48-55; col. 8, ll. 5-8, ll. 44-47).

For the reasons set forth above and in the Answer, the Examiner has established a *prima facie* case of unpatentability based on anticipation with respect to claims 1 and 40 (i.e., the only claims argued in the record of this appeal) which the Appellant has failed to successfully rebut with argument or evidence of patentability. *In re Oetiker*, 977 F.2d 1443, 1444, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Therefore, we hereby sustain the § 102 rejection of claims 1-3, 11-18, 26-30, and 38-40 as being anticipated by Brown. We also sustain the alternative § 103 rejection of these claims based on the proposition that anticipation is the epitome of obviousness. *In re Fracalossi*, 681 F.2d 792, 794, 215 USPQ 569, 571 (CCPA 1982). The other § 103 rejections of the remaining claims on appeal are sustained.

Appeal 2007-0086
Application 10/845,785

because Appellant has submitted no arguments thereagainst which are additional to the unsuccessful arguments discussed above.

Summary

The decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2006).

AFFIRMED

clj

David L. Hedden
Ashland Inc.
P.O. Box 2219
Columbus, OH 43216