

# United States Court of Appeals for the Federal Circuit

04-1441

MARLEY MOULDINGS LIMITED,

Plaintiff-Appellant,

v.

MIKRON INDUSTRIES, INC.,

Defendant-Appellee.

Hugh A. Abrams, Sidley Austin Brown & Wood LLP, of Chicago, Illinois, argued for plaintiff-appellant. With him on the brief were Constantine L. Trela, Jr. and Jon M. Spanbauer.

Janice V. Mitrius, Banner & Witcoff, Ltd., of Chicago, Illinois argued for defendant-appellee. With her on the brief were Jon O. Nelson and Wendell W. Harris. Of counsel was Michael J. Folise, Black Lowe & Graham PLLC, of Seattle, Washington.

Appealed from: United States District Court for the Northern District of Illinois

Judge John W. Darrah

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DECIDED: August 8, 2005

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Before NEWMAN, SCHALL, and DYK, Circuit Judges.

NEWMAN, Circuit Judge.

Marley Mouldings Limited ("Marley") appeals the decision of the United States District Court for the Northern District of Illinois, granting summary judgment that all of the claims of United States Patent No. 5,951,927 ("the '927 patent") are invalid for indefiniteness.<sup>1</sup> We reverse the judgment.

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<sup>1</sup> Marley Mouldings Ltd. v. Mikron Industries, Inc., No. 02-C-2855, 2004 U.S. Dist. LEXIS 2470 (N.D. Ill. Feb. 19, 2004); Marley Mouldings Ltd. v. Mikron Industries, Inc., No. 02-C-2855 (N.D. Ill. May 25, 2004) ("Recons. Order").

## BACKGROUND

The '927 patent is directed to a method of forming foamed composite plastic products for use in products traditionally made of wood, such as door frames, window trim, and moldings. It was known to form such products wherein the plastic contained wood filler or wood flour; however, the presence of filler complicates the process of producing foamed extrusions, and the wood flour tends to absorb moisture, which can cause rotting in the final product. Marley states that the '927 patented method solves these problems. Marley charged Mikron Industries, Inc. ("Mikron") with infringement, and Mikron raised various defenses. After a Markman hearing the district court invalidated the patent for indefiniteness under 35 U.S.C. §112 ¶2.

The '927 patent describes a two-stage process. In the first stage the wood flour is mixed with other components in order to encapsulate the wood flour and extrude the product to form pellets. In the second stage the pellets are mixed with additional resin and a blowing agent, and compressed, expanded, shaped, and solidified. Claim 1 is representative with respect to the issue on appeal, which relates to the measurement of components in parts by volume:

1. A method of forming a solid elongated member of predetermined profile for use as a door, window or frame molding, comprising the steps of:

encapsulating wood flour particles with a polymer resin in an extrudable material by high intensity mixing, said extrudable material consisting essentially of, in parts (volume):

|                |                           |
|----------------|---------------------------|
| polymer resin: | in an amount of up to 100 |
| wood flour:    | 15-140                    |
| stabilizers:   | in an amount up to 5      |
| lubricants:    | in an amount up to 5      |
| process aids:  | in an amount up to 10,    |

extruding and cutting said extrudable material to form pellets of said extrudable material,

mixing additional polymer resin and a non-aqueous blowing agent with said pellets to form an extrudable foam material,

compressing said extrudable foam material at a compression stage by passage through an orifice, said orifice having at one end thereof a predetermined profile,

said foam material consisting essentially of, in parts (volume):

|                 |                        |
|-----------------|------------------------|
| polymer resin:  | in an amount up to 100 |
| wood flour:     | 15-140                 |
| stabilizers:    | in an amount up to 5   |
| lubricants:     | in an amount up to 5   |
| process aids:   | in an amount up to 10  |
| blowing agents: | .2 to 5                |

expanding said foam material through a shaper, said shaper having an internal solid surface defining a channel for said foam material, and

solidifying said foam material to form a solid elongated member.

The parties agree that the claims require the volume of wood flour to be measured in connection with starting ingredients instead of the finished product. Contrary to Marley's contention, the district court correctly construed "in parts (volume)" to refer to the "proportional volumetric quantity of one material component to all other components within a given formulation." However, applying this construction, the district court held all of the claims invalid on the ground of indefiniteness, summarizing its reason as "because the means to calculate the percent volume of wood flour, a critical determination to discerning whether the final product has been produced by the claimed process and necessary to the practice of the invention, was not specified in the patent and could not be discerned by the specification." Recons. Order at 1. The court relied on Honeywell International, Inc. v.

International Trade Commission, 341 F.3d 1332, 1339-40 (Fed. Cir. 2003) and Morton International, Inc. v. Cardinal Chemical Co., 5 F.3d 1464, 1470 (Fed. Cir. 1993).

The district court held that the claims could not be applied to the accused Mikron process, wherein the components are measured by weight, not by volume. The product specification sheets provided by the suppliers of Mikron's wood flour state a range of bulk densities, giving upper and lower limits and average densities. The parties and the district court agreed as to the known mathematical equation relating weight and volume, whereby the volume of a bulk material is determined by dividing its weight by its bulk density. However, the parties disagreed about which of the Mikron density values should be used in the calculation, and the district court observed that the '927 patent "does not indicate what value for bulk density is to be used nor how to determine the bulk density." Marley, 2004 U.S. Dist. LEXIS 2470, at \*14.

The district court found that infringement depended on which of the density values in the Mikron specifications was used. The court explained:

Marley's expert evaluated the percent of wood flour in the final product, *i.e.*, literal infringement, by calculation of volume using both the highest and lowest bulk density values provided on the [Mikron] specification sheet from the wood flour supplier. Using Marley's expert's example of a foam material formulation with 5% wood flour/polymer pellets, coupled with the minimum bulk density of wood flour and the maximum bulk density of all other components, the volumetric percentage of wood flour in the foam material is 10.7%. In contrast, when the maximum bulk density of wood flour and the minimum bulk density of all other components is used, a volumetric percentage of wood flour in the foam material is 8.5%. Therefore, depending on which bulk density is used for each of the constituent ingredients, a different volume percentage of wood flour is obtained -- one at the lower limit of the claimed range and one outside the claimed range.

Id. at \*13. The court held that because infringement depended on the bulk density used to calculate the volumetric percentage of wood flour in the Mikron method, and because the

'927 patent did not state whether the average bulk density or what density range value was to be used, the claims are fatally indefinite.

## DISCUSSION

Summary judgment is appropriate "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed. R. Civ. P. 56(c). We review the grant of summary judgment using the same criteria as did the district court. The question of claim indefiniteness is a matter of law and receives plenary review on appeal, see Amtel Corp. v. Info. Storage Devices, Inc., 198 F.3d 1374, 1378 (Fed. Cir. 1999), and any disputed underlying facts on summary judgment are deemed resolved in accordance with the position of the non-movant. See Conroy v. Reebok Int'l, 14 F.3d 1570, 1575 (Fed. Cir. 1994).

The requirement of precision in claiming is codified as follows:

**35 U.S.C. §112 ¶2.** The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The statute is satisfied if a person skilled in the field of the invention would reasonably understand the claim when read in the context of the specification. See Union Pac. Res. Co. v. Chesapeake Energy Corp., 236 F.3d 684, 692 (Fed. Cir. 2001) (the definiteness requirement set forth in §112 ¶2 "focuses on whether those skilled in the art would understand the scope of the claim when the claim is read in light of the rest of the specification"); Miles Labs., Inc. v. Shandon, 997 F.2d 870, 875 (Fed. Cir. 1993) (if the claims "reasonably apprise those skilled in the art of the scope of the invention, §112 demands no more"); In re Moore, 439 F.2d 1232, 1235 (CCPA 1971) (the indefiniteness

inquiry asks whether the claims "circumscribe a particular area with a reasonable degree of precision and particularity").

Marley states that the district court confused infringement with validity, and that the relation between the weight of the Mikron wood filler and the volume criterion of the claims is an issue in determining infringement, not validity. Mikron responds that the volume of a given weight of wood flour will vary with its compactness, and that because the patent does not state the density of the wood flour used in its formulation, it is impossible to determine whether a given weight of wood flour will be of a volume that infringes the claims. Marley responds that this determination is readily made when the bulk density of the wood flour is known, and that the Mikron product specifications give the bulk density of the flour used in the accused process. Mikron states that the volume can be manipulated by shaking the wood powder in the container, and Marley states that there was no evidence of so significant a change in volume as to render the patent's volumetric measure confusing, misleading or unclear. Marley states that the Mikron purveyor's routine provision of a range of bulk density values for each shipment shows that the weight/volume relationships are readily determined and within a narrow range.

The parties and the district court agree that in accordance with claim 1, the minimum amount of wood flour in the first stage of the claimed process is 11.1% by volume (15 parts of 135 total parts).<sup>2</sup> They agree that the minimum amount of wood flour for the second

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<sup>2</sup> The 11.1% value is obtained by calculating the lowest amount of wood flour called for in the claims, 15 parts, as a percentage of the total materials when the highest amount claimed for the other materials is added, 135 total parts (15 parts wood flour + 100 parts polymer + 5 parts stabilizer + 5 parts lubricant + 10 parts process aids).

stage is 10.7% by volume (15 parts of 140 total parts).<sup>3</sup> In connection with infringement, Mikron's expert Professor Wolcott used the average bulk density values of the wood flour and the other materials used in the accused Mikron process, and proposed that there was not literal infringement. Marley's expert Professor Giacomini used the minimum bulk density value for wood flour, the value at the lower limit of the range provided in the specification sheet, together with the maximum values of the other materials, and proposed that there was literal infringement. The district court held the claims indefinite because the patent does not state which approach to use.

In Honeywell, 341 F.3d 1332, this court held indefinite a claim that included a specified melting parameter of a polymeric yarn but did not state which of four known methods of preparing and testing the yarn was used. In Honeywell there was evidence that the method of preparation and testing was critical to the measurement, and that only one of the four methods produced a measurement within the claimed range; whereby the court concluded that the claims were "insolubly ambiguous, and hence indefinite." Id. at 1340. In Honeywell it was shown that persons in the field of polymer chemistry understood that polymer melting point determinations vary significantly with the method used, rendering the claims "insolubly ambiguous." In contrast, it was not disputed that persons of experience in the field of the '927 invention would understand how to measure parts by volume, and how to convert weight into volume from bulk density data. Accepting Mikron's argument that

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3 The 10.7% value is similarly calculated as a percentage of the maximum total of 140 parts (15 parts wood flour + 100 parts polymer + 5 parts stabilizer + 5 parts lubricant + 10 parts process aids + 5 parts blowing agents).

shaking the wood flour may change its compactness, and thus produce different weight values for a given volume of wood flour, this argument relates to whether there is infringement of the claims. Although the district court was concerned that the claims encompass a range of volumes and thereby also of weights, §112 ¶2 is satisfied when the relevant values can be "calculated or measured." W.L. Gore & Assoc., Inc. v. Garlock, Inc., 721 F.2d 1540, 1558 (Fed. Cir. 1983).

Mikron states that measurement of components by weight, not by volume, is the standard practice in the field of polymer processing, and argues that the patentee's failure to conform to this practice is further support for the indefiniteness of the claims. However, non-conformity is not of itself indefiniteness. See, e.g., Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 806 F.2d 1565, 1576 (Fed. Cir. 1986) (§112 ¶2 is satisfied when the relevant values can be easily obtained). Marley chose to define and claim its invention based on volume. See In re Chandler, 319 F.2d 211, 225 (CCPA 1963) (a patentee's "freedom of choice" in selecting the means to point out and define the invention "should not be abridged").

We conclude that the district court erred in law, in requiring that the specification describe the relationship between volume and weight of the wood filler used or usable in the process. When a claim "is not insolubly ambiguous, it is not invalid for indefiniteness." Bancorp Servs., L.L.C. v. Hartford Life Ins. Co., 359 F.3d 1367, 1372 (Fed. Cir. 2004). The summary judgment of invalidity is reversed. We remand for further proceedings.

REVERSED AND REMANDED