

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GLEN CHARLES FEDYK, RALPH EDWIN NEUFARTH¹

Appeal 2008-0272
Application 10/179,808
Technology Center 3700

Decided: March 24, 2008

Before JAMESON LEE, HUBERT C. LORIN, and SALLY C. MEDLEY,
Administrative Patent Judges.

LEE, *Administrative Patent Judge.*

DECISION ON APPEAL

¹ The real party in interest is The Proctor & Gamble Company.

A. Statement of the Case

This is a decision on appeal by Appellants under 35 U.S.C. § 134(a) from a final rejection of claims 1-22. We have jurisdiction under 35 U.S.C. § 6(b).

References Relied on by the Examiner

Hood	US 3,753,437	Aug. 21, 1973
Rentmeester	US 5,792,096	Aug. 11, 1998

The Rejections on Appeal

The Examiner rejected claims 1 and 10 under 35 U.S.C. §102(b) as anticipated by Hood.

The Examiner rejected claims 1-9 and 11-22 under 35 U.S.C. §102(b) as anticipated by Rentmeester.

B. Issues

Have the Appellants shown error in the rejection of claims 1 and 10 as anticipated by Hood?

Have the Appellants shown error in the rejection of claims 1-9 and 11-22 as anticipated by Rentmeester?

C. Summary of the Decision

The Appellants have not shown error in the rejection of claims 1 and 10 as anticipated by Hood.

The Appellants have not shown error in the rejection of claims 1-9 and 11-22 as anticipated by Rentmeester.

D. Findings of Fact (Referenced as FF. ¶ No.)

1. The disclosed invention relates to a tampon applicator having a corrugated tip that facilitates insertion of a tampon into a body cavity (Spec. 1:9-10).

2. Claims 1, 11, 21, and 22 are independent claims. Claims 1 and 11 are representative and are reproduced below:

1. A tampon applicator comprising:

a) a hollow first member capable of housing a tampon, said first member having a central longitudinal axis, a first end and a second end; and

b) an insertion tip located on said first end of said first member and extending outwardly therefrom, said insertion tip having an aperture extending therethrough, said insertion tip including a plurality of corrugations having a trough and a ridge, capable of expanding outward as said tampon is expelled from said first member, wherein said trough is concave and said ridge is convex.

11. In combination, a tampon applicator and a tampon having a shaped nose, said combination comprising:

a) a tampon;

b) a hollow first member capable of housing said tampon, said first member having a central longitudinal axis, a first end and a second end; and

c) an insertion tip located on said first end of said first member and extending outwardly therefrom, said insertion tip having an aperture extending therethrough, said insertion tip

including a plurality of corrugations having a trough and a ridge, wherein said trough is a longitudinal protuberance, capable of expanding outward as said tampon is expelled from said first member.

3. Hood discloses an expandable tampon inserter having a sleeve 21 with an end formed by dovetailed infolding of the sleeve wall to reduce the diameter of the sleeve in the folded configuration and allow expansion to the original diameter when the folds are removed. (Hood 3:55-60.)

4. Rentmeester discloses a tampon applicator having a pleated tip that facilitates insertion of a tampon into a body cavity. (Rentmeester 1:8-10.)

E. Principles of Law

To establish anticipation under 35 U.S.C. § 102, each and every element in a claim, arranged as is recited in the claim, must be found in a single prior art reference. *Karsten Manufacturing Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383 (Fed. Cir. 2001). Anticipation can be found when a claim limitation is inherent or otherwise implicit in the relevant reference. *Standard Havens Products, Inc. v. Gencor Industries, Inc.*, 953 F.2d 1360, 1369 (Fed. Cir. 1991).

During examination, claim terms are given their broadest reasonable interpretation consistent with the specification. *See In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1990); *In re Prater*, 415 F.2d 1393, 1404 (CCPA 1969).

The ordinary meaning of claim terms may be established by dictionary definitions. *CCS Fitness Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002).

F. Analysis

The Appellants must show error in the decision of the Examiner rejecting the Appellants' claims 1-22.

Rejection of Claims 1 and 10
over Hood

The Examiner found that Hood anticipates each of claims 1 and 10. In particular, the Examiner pointed to Figures 2 and 3 of Hood et al. and their associated description as evidence of the anticipation of the Appellants' claims. (Ans. 3:8-12.) The Appellants have grouped claims 1 and 10 in this appeal.

We focus our analysis on the contested limitations. *Aero Prods. Int'l, Inc. v. Intex Rec. Corp.*, 466 F.3d 1000, 1012 n.6 (Fed. Cir. 2006). The dispute centers on the meaning of the term "corrugations."

The Appellants argue that Hood does not show a plurality of corrugations having a concave trough and convex ridge. (Br. 3:15-18.) The Appellants further contend that the "pleats" of Hood cannot be considered the Appellants' "corrugations" because "pleats" is defined as "a fold in cloth made by doubling material over on itself." (Br. 3:18 to 4:2.) The discussion about "pleats" and what "pleats" are is misplaced and unnecessary. Hood does not refer to "pleats" and none of the claims requires "pleats." The issue concerns what are "corrugations."

The Appellants' specification does not specially define the term "corrugations." During examination, claim terms are given their broadest reasonable interpretation consistent with the specification. *See In re Zletz*, 893 F.2d at 321; *In re Prater*, 415 F.2d at 1404. The ordinary meaning of

claim terms may be established by dictionary definitions. *CCS Fitness Inc. v. Brunswick Corp.*, 288 F.3d at 1366.

The term “corrugation” means: “1: the act of corrugating 2: a ridge or groove of a surface that has been corrugated.” Merriam Webster’s Collegiate Dictionary 261 (10th ed. 1996). “Corrugate” means: “to form or shape into wrinkles or folds or into alternating ridges and grooves.” (*Id.*)

In Hood, the shape of tip of sleeve 21 as shown in Figure 3 is described as being formed “by dovetailed infolding of the sleeve wall to reduce the diameter of the sleeve in the folded configuration and allow expansion to the original diameter when the folds are removed.” (Hood 3:57-59.) The meaning of “corrugation” and specifically “corrugate” includes the forming of wrinkles or folds. We find no error by the Examiner in determining that that the folds of Hood are properly regarded as a plurality of corrugations.

The Appellants also dispute the Examiner’s finding that the troughs and ridges identified in Hood are respectively concave and convex. The Appellants characterize those structures in Hood as “non-concave and non-convex.” (Br. 3:18-19.)

The terms “concave” and “convex” do not appear in the Appellants’ specification and were added to the claims during prosecution in an amendment filed December 13, 2004. To support the use of these terms, the Appellants pointed to page 11, lines 6-8 of the specification and Figure 5. (Amendment 6:3-6, Dec. 13, 2004.) The following is the text of the Appellants’ specification appearing at page 11, lines 2-8:

As seen in Fig. 5, the corrugations 50 are formed by folding the material into a series of alternating ridges 70 and troughs 72 where the transition radius at the fold between two adjoining trough or ridge

walls can be tight analogous to the bottom of the capital letter “V” in Arial typefont or more gentle or curved analogous to the bottom of the capital letter “U” in Arial type-font. Further, the corrugations can be tilted such that the cross-section appears like italicized capital letters “*U*” and “*V*” in Arial type-font.

The above-quoted text indicates that the concave troughs and convex ridges are formed when the transition radius of the corrugation is either tight in a manner analogous to the letter “V” or more gentle in a manner analogous to the letter “U.” We apply to a claim term its broadest reasonable meaning according to ordinary usage as it would be understood by one of ordinary skill in the art, taking into account whatever enlightenment afforded by the written description contained in the specification. *See In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

The word “analogous” is imprecise and permits reasonable deviations. The corresponding transition walls between the ridges and troughs of the folds identified by the Examiner in Hood (Ans. 3) resemble the curvature of the bottom of the letter “U” and are thus analogous to that shape in the manner suggested in the Appellants’ specification. Further, the Appellants’ have not explained why those structures in Hood should be regarded as “non-concave and non-convex.” No error has been shown in the Examiner’s determination that the shape of the corresponding troughs and ridges in Hood satisfy the concave trough and convex ridge features as claimed.

Accordingly, we sustain the Examiner’s rejection of claims 1 and 10 under 35 U.S.C. § 102(b) as anticipated by Hood.

Rejection of Claims 1-9 and 11-22
over Rentmeester

The Appellants argue claims 1-9 as one group and claims 11-20 as another group. With regard to claim 21 and 22, the Appellants have grouped them either with claims 1-9 or claims 11-20.

With regard to claim 1, the Examiner found that the claim is anticipated by Rentmeester and pointed to Figure 12 as the supporting evidence. The Examiner determined that the pleats disclosed in Rentmeester satisfied the Appellants' recited "corrugations." (Ans. 4.)

The Appellants dispute that Rentmeester shows a corrugated insertion tip having a trough and ridge where the trough is concave and the ridge is convex as recited in claim 1. (Br. 5: 5-7.) The Appellants argue that the "pleats" as shown in Rentmeester suggest folds having material that is doubled over on itself, which should be considered distinct from the Appellants' recited corrugations. (Br. 5:8-11.) The dispute again centers on the meaning of the term "corrugations."

As discussed above, the Appellants' specification does not specially define the term "corrugations." The ordinary meaning of corrugation includes a surface that has been formed into wrinkles or folds.

The pleats in Rentmeester are formed in the following manner (Rentmeester 7:24-27):

The pleat 54 is obtained by folding the paper, paperboard, cardboard material upon itself so that when the pleat 54 is opened or unfolded it will occupy a much larger surface area.

In similar fashion, the Appellants provide that (Spec. 11:18-24):

The corrugation 50 is obtained by folding the paper, paperboard, or cardboard material (or alternately plastic or polymer material) so that the

folding decreases the overall perimeter or circumference due to the accumulation of material with each corrugation 50 and then when each corrugation 50 is opened or unfolded it will occupy a much larger perimeter/circumference or surface area than in the previous folded state.

Neither the Appellants' claims nor specification prohibits corrugations from being formed from material folded over itself or formed as a pleat. Moreover, such an arrangement is not excluded from the ordinary meaning of the term "corrugation." During examination, claim terms are given their broadest reasonable interpretation consistent with the specification. *See In re Zletz*, 893 F.2d at 321; *In re Prater*, 415 F.2d at 1404. Therefore, construing "corrugations" to encompass the structure of the folded pleats disclosed by Rentmeester is correct. No error has been shown in the Examiner's determination that the pleats of Rentmeester satisfy the claims requirement of a plurality of corrugations.

The Appellants argue that, as shown in Figure 8 of Rentmeester, the folds of the pleat 54 do not have a concave or convex shape. (Br. 6:1-2.)

We again note that the terms concave and convex do not appear in the Appellants' specification. We also again make reference to the Appellants' specification appearing at page 11, lines 6-8, which was alleged by the Appellants to provide support for the concave and convex limitations now appearing in the claims (Amendment 6:3-6, Dec. 13, 2004).

In Rentmeester, the nature of the pleats 54 is to allow the insertion tip 32 of the tampon applicator to enclose a tampon (Rentmeester 2:34-37) then open radially outward so as to expel the tampon (*Id.* at 6:61-65; 9:26-29). Figure 8 is described as showing a schematic view of a pleat 54 in its most folded state (*Id.* at 7:23-27), whereas Figure 12 is described as showing pleats 54 in an open state after a tampon has been expelled (*Id.* at 9:29-31).

The Appellants' argument that Figure 8 of Rentmeester fails to show a concave trough and convex ridge does not take into account the shape of the pleats in their less than most folded state. Because the pleats are intended to unfold, the entire range of transition radii of the pleats from the folded state shown in Figure 8 to the open state shown in Figure 12 is disclosed by Rentmeester.

We find that a person of ordinary skill in the art would appreciate that the orientation of the folded overlapping ridge portions shown in Figure 8 of Rentmeester reflects only an extreme position. If the full scope of the disclosure is considered, as it should be, then Rentmeester discloses a range of configurations all of which are analogous to the shape of the capital letter "U," thus satisfying what the Appellants regard as concave or convex (Amendment 6:3-6, Dec. 13, 2004; Spec. 11:6-8).

In any event, and in the alternative, given the Appellants' indication in the specification that something merely "analogous" to a "U" shape qualifies as concave or convex, we find the folded configuration as shown in Figure 8 of Rentmeester to resemble something analogous to a "U" shape. Because the folded configuration of Figure 8 of Rentmeester defines an upwardly open cavity, its configuration is analogous to a "U." The Appellants have not put forth any explanation as to why the folded configuration of Figure 8 cannot reasonably be deemed analogous to a "U."

Therefore, for all of the foregoing reasons, no error has been shown in the Examiner's determination that the pleats of Rentmeester have a trough that is concave and a ridge that is convex.

With regard to claim 11, the Appellants dispute that Rentmeester discloses a corrugated insertion tip having a trough and a ridge wherein the trough is a longitudinal protuberance. (Br. 6:3-5.)

For the same reasons as discussed above for claim 1, the argument that Rentmeester does not disclose a corrugated insertion tip having a trough and a ridge is unpersuasive.

With regard to the longitudinal protuberance limitation of claim 11, we note that the term “longitudinal protuberance” also does not appear in the specification but instead was added to the claims during prosecution in the amendment filed December 13, 2004. The term was asserted to be supported by the Appellants’ Figure 5. (Amendment 6:7-9, Dec. 13, 2004.) According to the Appellants’ specification, Figure 5 simply shows a schematic view of the corrugations taken along line 5-5 of Figure 3 depicting the shape and thickness of the corrugations. (Spec. 4:13-14.)

The Appellants’ argument that “[a]s seen in Fig. 8 in the Rentmeester et al. patent, the base of the pleat does not protrude at all” is unpersuasive. As illustrated in Figure 8 of Rentmeester, pleat 54 clearly has trough portions that extend in different directions and thus protrude from the wall 24 of the applicator member 20. The only longitudinal axis that Appellants’ claim 11 has defined is the axis of the hollow first member of the applicator (claim 11, line 4). We construe “longitudinal” in the term “longitudinal protuberance” as along the length of the hollow member of the applicator, because (1) the only longitudinal axis defined is that of the low first member of the applicator, (2) the Appellants have not argued any other direction of longitudinal extension, and (3) longitudinal reasonably designates the direction in which a device is the longest. In Figure 12 of Rentmeester, each

trough of pleat 54 forms a protuberance which runs in the long direction of the hollow member of the applicator and thus is a longitudinal protuberance. We are not persuaded of any error in the Examiner's determination that the pleats of Rentmeester, as shown for instance in Figures 8 and 12, show a longitudinal protuberance.

We therefore sustain the Examiner's rejections of claim 1-9 and 11-22 under 35 U.S.C. § 102(b) as anticipated by Rentmeester.

G. Conclusion

The rejection of claims 1 and 10 under 35 U.S.C. §102(b) as being anticipated by Hood et al. is **affirmed**.

The rejection of claims 1-9 and 11-22 under 35 U.S.C. §102(b) as being anticipated by Rentmeester et al. is **affirmed**.

AFFIRMED

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