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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte YUKI MOTOKAWA

Appeal 2019-004246¹
Application 14/796,037
Technology Center 3700

Before PHILLIP J. KAUFFMAN, TARA L. HUTCHINGS, and
ALYSSA A. FINAMORE, *Administrative Patent Judges*.

FINAMORE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant² appeals from the Examiner’s decision to reject claims 1, 6, 11, 13, 14, and 16–23. We have jurisdiction under § 6(b). We REVERSE.

¹ We reference herein the Specification filed July 10, 2015 (“Spec.”), Final Office Action mailed May 3, 2018 (“Final Act.”), Appeal Brief filed October 31, 2018 (“Appeal Br.”), Examiner’s Answer mailed March 7, 2019 (“Ans.”), and Reply Brief filed May 7, 2019 (“Reply Br.”).

² “Appellant” refers to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Sumitomo Rubber Industries, Ltd. Appeal Br. 1.

CLAIMED SUBJECT MATTER

Claims 1 and 21 are independent. Independent claim 1, reproduced below, is illustrative of the claimed subject matter.

1. A wood golf club head comprising:
 - a hollow structure body having a face surface for hitting a ball, wherein
 - the hollow structure body has an inner surface and a thick portion in a predetermined region on the inner surface excluding a rear surface of the face surface,
 - the thick portion is located outward of a virtual curved surface so as to be in substantial continuous surface contact with the virtual curved surface and has an outer surface extending along the virtual curved surface,
 - a predetermined reference point is located inside the hollow structure body,
 - a distance between the reference point and the golf club head center of gravity is 0.0 mm and 5.0 mm,
 - the virtual curved surface is defined by a part of the outer surface of the thick portion, and
 - the virtual curved surface is (a) a curved surface that defines a part of an outer surface of a virtual sphere centered about the reference point or (b) a curved surface that defines a part of an outer surface of a virtual cylinder or a virtual cone having a central axis that is a straight line passing through the reference point.

Appeal Br., Claims App.

REJECTIONS

Claim(s) Rejected	35 U.S.C. §	Reference(s)/Basis
1, 11, 13, 14, 16, 18–23	102(a)(2)	Burnett ³
6, 17	103	Burnett

³ US 2006/0116218 A1, published June 1, 2006.

ANALYSIS

In rejecting independent claim 1, the Examiner finds Burnett's horseshoe shaped weight member 40 discloses the recited thick portion, and that the concave outer surface of weight member 40 discloses the recited outer surface. Final Act. 2. The Examiner also annotated Burnett's Figure 5 to show the recited virtual curved surface, center of gravity, and predetermined reference point. *Id.* at 3. We reproduce the Examiner's annotated figure below.

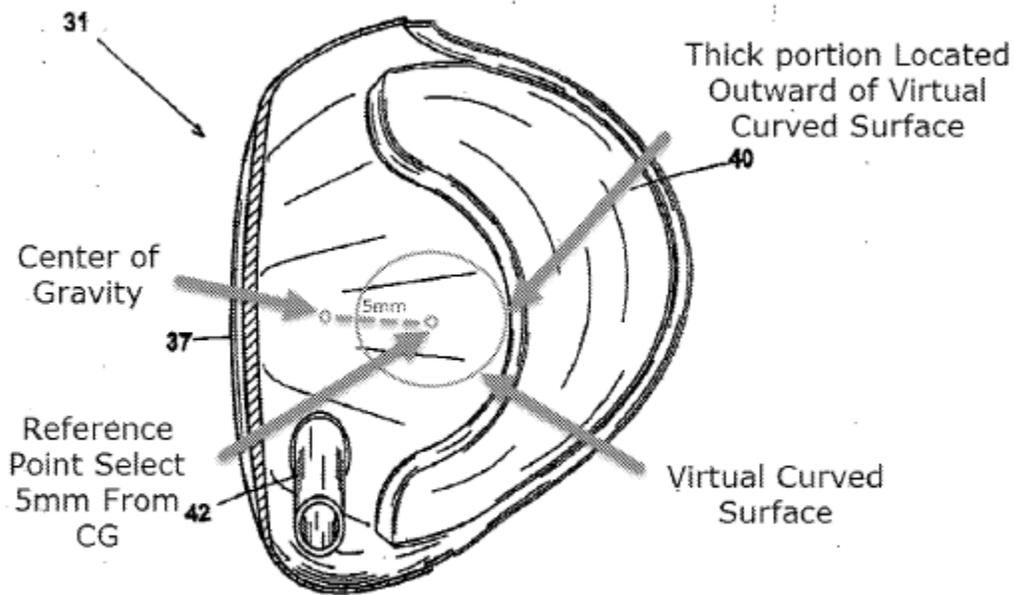


FIG. 5

Figure 5 of Burnett is a cut out top view of a golf club head having first body portion 31. Burnett ¶¶ 26, 50. The Examiner annotated Figure 5 to show how Burnett's golf club head teaches: the virtual curved surface, thick portion located outward of the virtual curved surface, center of gravity, and predetermined reference point located 5.0 mm from the center of gravity, as recited in independent claim 1. Final Act. 3.

Appellant argues Burnett does not disclose all of the limitations of independent claim 1 because

Burnett '218 fails to disclose or suggest employment of a golf club head having: a thick portion located outward of a *virtual curved surface* (i.e. a sphere, cylinder or cone) which must: [1] *be in substantial continuous surface contact* with the virtual curved surface and [2] have an outer surface extending along, and defining at least a part of, the virtual curved surface, wherein a “reference point”, which is the center point of a virtual sphere or on the axis of a virtual cylinder/cone, must be within a 5.0 mm, or a 2.0 mm, distance of the center of gravity of the club head.

Appeal Br. 6; Reply Br. 2–3. Appellant’s argument is persuasive.

As Appellant points out, the limitation reciting “the thick portion is located outward of a virtual curved surface so as to be in substantial continuous surface contact with the virtual curved surface” requires that the outer surface of the thick portion contact the virtual curved surface at more than just a single point of tangency. Reply Br. 3. Likewise, the portion of the limitation reciting “an outer surface extending along the virtual curved surface” requires contact extending along some region of the virtual curved surface. This interpretation is consistent with the description of outer surface 20a of thick portion 20 and virtual curved surface V_2 in the Specification. Spec. ¶ 39, Fig. 7.

At most, the Examiner has shown that Burnett’s thick portion, i.e., weight member 40, contacts a virtual curved surface at a single point of tangency, when the virtual surface is centered about a reference point spaced 5.0 mm from the center of gravity of the club head. This finding does not satisfy the limitations of independent claim 1.

In view of the foregoing, the Examiner has not shown Burnett discloses all of the limitations of independent claim 1. Independent claim 21

has similar limitations to independent claim 1 (Appeal Br., Claims App.), and the Examiner’s rejection of independent claim 21 suffers from the same deficiency as the rejection of independent claim 1. (Final Act. 2–4, Ans. 3–10). We, therefore, do not sustain the rejection of independent claims 1 and 21, and claims 11, 13, 14, 16, 18–20, 22, and 23 depending therefrom.

Additionally, the Examiner determines the subject matter of claims 6 and 17 would have been obvious over the teachings of Burnett, combined with the finding that “to have adjusted [the location of the center of gravity relative to the thickened portion] would have been an obvious matter of design choice in order to control the weighting and balance of the club head as desired.” Final Act. 4. This finding does not remedy the deficiencies in the teachings of Burnett as applied to independent claim 1. Accordingly, we similarly do not sustain the rejection of claims 6 and 17.

CONCLUSION

Claim(s) Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1, 11, 13, 14, 16, 18–23	102(a)(2)	Burnett		1, 11, 13, 14, 16, 18–23
6, 17	103	Burnett		6, 17
Overall Outcome				1, 6, 11, 13, 14, 16–23

REVERSED